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A study of the effects on teaching methods and teaching styles of converging national and international curricula at The Koç School - Istanbul

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A study of the effects on teaching methods and teaching styles of converging national and international curricula at The Koç School - Istanbul

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ABSTRACT

The aim of this research enquiry has been to explore the relationship between teaching methods and styles and the creation of a convergent curriculum, merging the Turkish National Education Programme (TNEP) and the International Baccalaureate Diploma Programme (IBDP) within the Koç School, Istanbul, Turkey. The methodology used is a case study, involving the same teachers teaching both the TNEP and the IBDP sections of the same class levels during similar lessons. Teachers from two different departments (Mathematics and Languages) were chosen as the sample group in order to explore whether subject area variation was linked to the pedagogical behaviour of teachers, while trying to discern whether the IBDP and TNEP each imply specific teaching methods and thus influence the teaching style of the teachers.

Bringing together data from observations and interviews that required the teachers in both groups to reflect on their own practice, and provide reasons for similarities and differences in their teaching, was helpful in considering the feasibility of the creation of a convergent curriculum from a synthesis of the national and the international, the TNEP and the IBDP.

Advantages, such as the dynamic atmosphere emerging from the confluence of the two programs, the academic and cultural enrichment and the deepening of understanding that encourages further learning are discussed, as well as the limitations and difficulties imposed by the clashing regulations and requirements of the two different curricula. Observations suggest that transferability of teacher skills between the IBDP and TNEP sections leads to common benefits for students of both groups, and benefits school curriculum development, implying the need for professional development arising from the creation of a convergent curriculum.

CHAPTER ONE: INTRODUCTION

The Koç School in Istanbul, Turkey was founded by the Vehbi Koç Foundation, a philanthropic organization of the Koç family, whose children were educated in an American school in Istanbul. When the family decided to make a gift of a progressive school to their country, they had that American school in mind as a model. Thus, the Koç School was founded in 1988 as the first English-medium Turkish private school that had a foreign model and Head. The school was an immediate success because of the rich resources bestowed on it by the family foundation, and could select its students from an abundance of candidates because of the trusted name of the respected business conglomerate that supported the foundation. Some families who could afford to send their children to private schools, but preferred a Turkish school were also presented with an option. The Ministry of National Education (MNE) was also anxious to embrace a prestigious Turkish private school, and all parties had high expectations for the school. The dynamic foundation years were followed by the school's initiative to introduce, for the first time in Turkey, the International Baccalaureate Diploma Programme (IBDP) to students between the ages of sixteen and nineteen in conjunction with the Turkish National Education Programme (TNEP). This initiative was in harmony with part of the school's mission to nurture Turkey's future leaders.

The two programmes, IBDP and TNEP were offered side by side at the school, but the IBDP was chosen only by students who aimed to go abroad for higher education. In fact, the intention of the school administration was to introduce the international programme into the school curriculum and prove the school's standards abroad as well as within Turkey. In a short time, it became apparent to the administration that a divisive atmosphere had begun to surface within the school, which was definitely not the initial aim in offering the international programme. In the absence of recognition of the IB diploma for direct entry into Turkish universities, and the additional preparations necessary for the university examinations, the IBDP seemed to be a distraction for students studying for Turkey's highly competitive university placement examinations (ÖSS). There was a growing resentment toward the students who were able to enjoy their international programme more without the onerous preparation courses for the ÖSS.

Thus, it was decided to work with the teachers toward the unification of the two programmes at school. It was made a school policy that teachers would not be labeled as IBDP or TNEP

teachers. Where possible they would be given both IBDP and TNEP sections, and if there were not an equal number of sections to do this in one year, teachers would take turns. The following year, different teachers would start after those who completed the two-year cycle of the IBDP. Intentional efforts were made to have all the teachers benefit from IB workshops, offered by the IB organization and official IB workshop leaders were invited to the school to train whole departments. Some teachers were sent to regular IBDP workshops. The idea was that if the teachers learned about the IB programme, methods, and assessment techniques, they would add these to their repertoire of skills and would use what worked for them naturally in both sections. This would help to eliminate the perception that very different styles are prevalent in the two different programme groups and that one was more enjoyable than the other.

As suggested by Caine and Caine (1991: 153), "individual schools can determine their own models and protocols…. What matters is that most of the members of the community take ownership of the decisions and genuinely implement them." The Koç School administration further purposefully planned, as suggested by Caine and Caine, to make a special effort to introduce the IBDP to other stakeholders as well, so that they would take ownership and support it. The senior officers of the Turkish universities were given presentations in the hope that they would offer some tangible rewards such as scholarships for the IB diploma holders, joining forces with the other schools that started the IB programme following the Koç School model. Some private universities began providing scholarships and other benefits to IB graduates. The Koç School counsellors and administration advised the students and their families of such developments and informed them about the details of the programme.

The next big policy decision arose from the merging of the two programmes. There was some spontaneous cross-breeding of methods because it was observed informally that the teachers carrying over to the TNEP classes the skills they had acquired and the methods they had learned at IB workshops. The extracurricular component of the IB programme--Creativity, Action, Service (CAS)--began to attract the non-IB students. Soon the students in the non-IB group objected to being referred to as 'non-*something'* [non-IB in this case] which they rightfully claimed to have a negative connotation. They began to be called the Regular Group (R), which was not particularly satisfactory either. All the signals were pointing toward either merging the two programmes or enduring the negative influences on the school culture of trying to keep them separate.

The academic departments were asked to compare the two programmes and report on the overlaps and the differences. It was found that the overlaps in content were much greater than expected, so it was possible to make curricular arrangements to accommodate the missing parts. The bigger difference was in methodology: more student-centred, connectionist, and constructivist in the IBDP, more teacher-centred and rote learning because of content overload in the TNEP. The departments were asked to make an effort to bridge the gaps between the two programmes and in some areas complete convergence was achieved in a short time. In other areas, there was more resistance from the teachers, and it has been taking a longer time. The efforts are ongoing and will continue as a school policy explicitly stated in the School Strategic Plan.

STRUCTURE OF THESIS

The research aim, which is 'To explore the relationship between teaching approaches and styles and the creation of a convergent curriculum merging the Turkish national education program (TNEP) and the International Baccalaureate Program (IBDP) within the Koç School' is introduced in Chapter One.

In Chapter Two, The Koç School setting and its unique characteristics that influence teaching and learning are explained in order to help understanding of the research question 1: Are the teaching approaches used by the teachers different while teaching different programs, i.e. IBDP and TNEP? Some insights are provided about the characteristics of the TNEP, the IBDP, and the merger of the two, the Koç School Programme (KSP). The challenges of creating such a merger, the advantages and disadvantages, are discussed.

Chapter Three: Theoretical and Practical Perspectives on Pedagogy, attempts to clarify the terminology in pedagogy. The art, the science and craft of teaching, style, method, approach, paradigm, and some other terms used to describe teaching behaviour are examined. Concomitantly, a literature review from the point of view of developments in teaching style, methods, and relevant theories is provided to assist with the understanding of the findings.

In Chapter Four, the Research Design and the methodology are presented. The design and development of the data gathering instruments and the revisions thereof after piloting are explained in detail and discussed.

In Chapter Five, Implementation and Data Analysis, and the Pilot Study undertaken are summarized. Results of the group interviews held with the members of the two departments, designed to analyze the appropriateness of the interview schedule and the questions are included here as well. The accounts of class observation visits and interviews with those teaching both the IBDP and the TNEP sections follow. The purpose of these observations and interviews is to provide data that may lead, by analysis, to the identification of any differences in the teaching styles and methods these teachers employ and to provide explanations for any such differences. Outcomes are presented, and more examples appear in Appendices. Comparisons are made to show variations between the teaching characteristics deployed in the IBDP and the TNEP groups and between teachers in the different subject areas. Recurring themes and interpretation of results are also covered in this chapter.

Chapter Six covers discussion of the results from the outcomes in the light of theories in the literature review, and arriving at a conclusion by making sense of the research after synthesizing the information and insights and possible implications. A final analysis shall be made of the findings reviewing the Research Questions according to the explanations from the discussions in order to arrive at the concluding statement about the research aim: an exploration of the relationship between teaching styles and the creation of a convergent curriculum merging the Turkish National Curriculum and the International Baccalaureate Diploma Programme. The anticipation is that this study will clarify our understanding of the effects on teaching methods and teaching styles of converging national and international curricula at the Koç School, Istanbul and help to ascertain whether the IBDP and the TNEP imply specific teaching methods and influence the teaching styles of the teachers involved. As a result of this enquiry having a more comprehensive understanding of the feasibility of a convergent curriculum from the synthesis of the national and the international curricula by way of merging the TNEP and the IBDP is expected. If such convergence is feasible and if it is a better model of education, the insights gained may be of assistance in planning for the professional development of teachers and for school curriculum development arising from the implementation of such a convergent curriculum.

Chapter Seven is a self-reflection process reviewing what I have gained from this study personally, my learning and maturation process as well as possible suggestions for further research, which was beyond my focus but would complement and extend these findings.

CHAPTER TWO: CONTEXT

This chapter will begin by describing the Turkish context, the IBDP, TNEP and the Koç School programme converging the IBDP and TNEP. The metaphor of a bridge between the East and the West is frequently used for Turkey with land in both Europe and Asia. According to the 2007 census Turkey has a population of 70.586.256 million (http://www.nvi.gov.tr/11.html) with half its population below 25 years of age. The number of schoolchildren in Turkey is greater than the population of many European countries encumbering the state with the burden of providing free education for so many students, employing teachers, and building and maintaining schools.

THE TURKISH NATIONAL EDUCATION PROGRAMME (TNEP)

Aristotle, in Books VII and VIII of the *Politics* regards education as a public matter that has important ethical, social and political consequences (Squires, 1999: 111). Such an approach is evident in the goals of the Turkish National Education Programme. They can be summarized as bringing up the new generation as individuals (1) who have nationalistic and human values committed to the principles of Mustafe Kemal Atatürk, (2) who are responsible citizens with sound health and reasoning, (3) who are equipped with skills and knowledge for life and career so that they can contribute to society. These are summed up by the words, "to make the Turkish nation a constructive and distinguished partner of contemporary civilization." (MNE, 2001) The same concerns for instilling positive values in the youth and bringing them up as good citizens of their nation and the world at large are probably common threads for almost all curricula, but they surely are articulated explicitly in the TNEP, the IBDP, and the Koc School goals. (For comparison see Appendix I)

TNEP's goals and objectives are clearly stated and a unifying and scientific written curriculum that cater for needs of the nation is provided. The Ministry of Education also functions as a control mechanism to ensure that education is not used for religious or political intentions as it is one of the most important and effective tools of influence of all religious and political doctrines.

1997 Reforms

In 1997, the Turkish Ministry of Education signed the Lisbon Convention to embark on the harmonization process for EU membership. One example of necessary curriculum adaptations was the requirement for two foreign languages to satisfy the EU goals for increasing communication among members. The goal is positive, of course, but under Turkey's present circumstances, providing teachers of a second foreign language presents difficulties. Another problem is that whenever a new subject is added to the curriculum, something needs to be dropped, but reluctance to do this means that the programme becomes overloaded for the students.

In 1997, the five-year obligatory elementary education became eight years, including grades 6-8. The elementary programme was revised with a constructivist approach, and its implementation began in 2005. The duration of high school was also increased from three years to four, beginning the with 2006-2007 school year. (The Koç School had already started the four-year high school in 2002.) These changes were made primarily to bring the TNEP in line with the other European countries in respect of the duration of general education.

The Effect of University Placement Examinations (ÖSS)

Even if the Ministry of National Education did not put restrictions on the schools, more creative and liberal educational initiatives are automatically limited by the highly competitive university examinations that occur only once a year. Availability of places only for one-tenth of the applicants makes equity of opportunity a big issue. All the schools feel obliged to follow the national curriculum on which the University Placement Examinations (ÖSS) are based. In a way, it is not wrong to say that the ÖSS drives the high school curriculum in Turkey. The curriculum cannot be improved freely by independent schools because of the content of 'the big test'.

The Problem of Equity

In order to ensure that fairness is guaranteed in these central examinations, decisions are made on the basis of the common denominator. That causes standards to be lowered. The same examination is given to students in resource rich schools as well as to students in resource-poor schools. Thus, the economic status and fund allocations are political decisions of the

government that affect education and social development. Striving for unity, or equity in opportunity, does not work, because it hinders the progress of those with adequate resources. The fairness of this is not addressed in Turkey.

Advantages and Disadvantages of the TNEP and Comparison with International Examples

The Turkish National Education Programme is prescriptive. The goals and objectives are clearly stated. The scope and sequence is generally chronological. The biggest problem for students and teachers alike is content overload. Emphasis is given to providing the basic general information background for a student preparing for university.

Turkey is not unique; similar comparisons are made in Gvirtz and Beech (2006), describing educational policies in South America. The reforms of 2005 in Turkey are reminiscent of those in Argentina of the 1990s. Apparently, Argentina's Common Basic Content (CBC), which was to be used as guidelines for the design of actual curricula began to be used as the new curriculum for the schools. The situation was very similar in Turkey with the new reforms. Teachers who were used to very prescriptive curricula issued by the Ministry were not accustomed to using their own initiative. As effective professional development for such vast numbers of teachers was problematic, the inspectors were asked to undertake this function. Public acceptance by teachers of the change of inspectors' role into an advisory one has been difficult. Another challenging area for most teachers has been alternative assessment requirement of the new constructivist curriculum.

Things were not very different in England and Wales, which led to the 1994 National Curriculum Orders. Coulby & Jones (1995) comment that the National Curriculum was over-crowded and the public test results appeared to depend on the diligence with which it was followed. Therefore, postmodernist knowledge was squeezed out of schools and content was slimmed down, however the essential modernist structure was substantially unaffected.

The Foundation Year

In Turkey, the ninth grade is considered as the foundation year. Therefore, students are given the full range of courses with almost no elective opportunities. At the end of the year, at age 15, they are asked to choose a specific 'track'. This choice is critical, because what track they select will affect their university options. As a result, the role of career counselling at such an age is very important. As there are not enough counselors or an advisory programme, career counseling service is not sufficient in public schools. Students are offered these services at the private weekend courses, which promote test taking skills and rote learning.

A freshman takes the following courses: Turkish Literature, Turkish Language, Religion and Ethics, History, Geography, Mathematics, Physics, Chemistry, Biology, Hygiene, Foreign Language, Second Foreign Language, and Physical Education. Thirteen different subjects are more like introductions into the subject field. No in-depth work and laboratory experiments can be done in a two-hour course. In the following year, they are asked to specialise by choosing their tracks, such as Science, Social Science, Turkish-Math (like Liberal Arts), and Language. The fewest they have is eleven courses. Hayden (2006: 138) points out that while IBDP is considered a broad curriculum compared to A levels because of components such as the Extended Essay, Theory of Knowledge (TOK) and Creativity, Action, Service (CAS), she says that it is looked at as "quite narrow in, say, some countries of continental Europe where the students in the national system follow a much wider range of courses through to the end of compulsory schooling." Later, in the section on the Koç School, we will see that IBDP adds depth to the breadth of the TNEP in the convergent curriculum. Then, understanding of the depth and breadth of the curriculum is in fact a relative issue, depending on the applications of curriculum in that country.

THE IB DIPLOMA PROGRAMME (IBDP)

Both the Vehbi Koç Foundation and the IB are non-profit organizations that believe that education provides solutions to many of the world's problems. Therefore, when the Koç School opted for an international component in 1994, IBDP was the programme chosen, with the belief that it can serve the school's mission.

The International Baccalaureate Diploma Programme (IBDP) is a Switzerland-based university preparatory programme for students aged sixteen to nineteen. It was originally designed for the children of 'global nomads', i.e., people working in diplomatic service, international business, and the like. IB has three working languages (English, French and Spanish) and is recognized internationally as a programme of high standards. The graduates of this programme gain admittance to selective universities worldwide. (IB, 2007)

Writing about the beginnings of the IB Diploma Programme, Hill (2007: 27) says, "the first definition of the IBDP was devised by a team of practising teachers from international schools and it corresponded to the post-Second World War idealism for a peaceful world." The IB mission statement reads as follows:

> "The International Baccalaureate aims to develop inquiring, knowledgeable and caring young people who help to create a better and more peaceful world through intercultural understanding and respect. To this end the organization works with schools, governments and international organizations to develop challenging programmes of international education and rigorous assessment. These programmes encourage students across the world to become active, compassionate and lifelong learners who understand that other people, with their differences, can also be right."

Much has been written on different aspects of the IBDP by Peterson (1987), Walker (2002, 2006), Hill (2007), Thompson (1988, 1998), Hayden (1998, 2006, 2007), and many others. Over the years since its inception nothing has been lost from that humanistic idealism and the wish for a peaceful world, along with the initial goal of providing an international curriculum and assessment guides.

Alec Peterson (1987) the first Director General of IBO, tells the story of the founding years of the IBDP says that they had decided that process was more important than content, and instead of aiming for acquisition of knowledge, development of the mind generally was prioritised in designing the IBDP. This is the philosophical difference between the TNEP and IBDP methodologies. From the weekly schedule of the students at the Koç School, and the number of subjects that they have to take, it is clear that the two curricula operate with

totally different approaches (See Appendix II for the weekly schedule). However, when comparing the two programmes, it must be remembered that the TNEP is a four-year general high school programme. IBDP is a two-year preparatory programme for ages sixteen to nineteen. Therefore, even if the IBDP is regarded as a balanced curriculum, it is not a full programme for general high schools. After the introduction of the Middle Years Programme (MYP) in 1994, and the Primary Years Programme (PYP) in 1997, the horizontal continuum of the programme was established, but not all IBDP schools implement the PYP and MYP.

The IBDP's Worldwide Acceptance

The reasons for IB's wide acceptance and international use are explained by Thompson (1998: 279) when he refers to " **'**best practices' from a range of successful curricula are brought together to determine a curriculum that may be operated across a number of systems or countries." If it were the curriculum of one country only, for political reasons and rejection of cultural imperialism, many national systems could have rejected the implementation.

Walker (2004: 205) in an IB Conference address, says, "The whole point of a 'holistic' curriculum is that one discipline should illuminate another and, taken together, they should offer a richer and more accurate interpretation of the world." He elaborates by saying that there was no point in simply adding disciplines to a curriculum (which has unfortunately been the case in Turkey). He continues: "There has been some deliberate attempt to balance breadth against depth, if necessary to sacrifice some quantity in the name of quality." He reports that this could be described as "the programme [that] has had the courage to leave some gaps." The word 'courage' is very interesting indeed. In the Turkish National Education Programme, there are some subjects such as history that are hard to touch, and existence of others that have been guaranteed by the Constitution or laws. For example, a 'Traffic' course was mandated by parliament after much lobbying for the prevention of traffic accidents by educating youth. The cause is very good, but it certainly did not have to be a mandatory course. A unit in another subject, or even in two different subjects, would have served the purpose without causing course inflation. This is an example of unprofessional meddling by politicians in the job of educators.

Assessment of the IB programme has a big effect on its acceptance as a worldwide standard of international education. It has criterion-based examinations evaluated both internally and externally under the same conditions for students of the same age group around the world, which means that its standards are established internationally. As a result, it has developed into one of the best-known programmes of international recognition in 2,218 schools (all three programmes) in 125 countries with 596,000 students according to IB statistics-January 2008. Hill (2007), Deputy Director general of the IB states that 80 percent of the IB schools and 65 percent of the candidates who took the May 2006 diploma examinations were from state and private schools, the remainder were from international schools. This shows the worldwide approval of the IBDP as a preferred international curriculum: its implementation and assessment in three widely spoken languages, (English, French and Spanish) plays a role in such widespread acceptance.

Although it is a fee-paying programme, and the students need to be enrolled for a period of two years, the IBDP is not an elitist programme academically. In my experience, it is not designed just for the brightest students but rather for any student who is a diligent worker. Many very selective universities, especially in the United States, recognize the IB diploma. Students with good diploma points can receive college credits as occurs with the long-established Advanced Placement (AP) system. Compared to the AP, which is course-based and more test result-oriented, IB is a complete programme with a balanced spread of courses in different areas.

In addition to its academic programme, IBDP targets the development of the whole person. CAS addresses aesthetic and athletic aspects, and social humanistic values, TOK covers the reflective angle; and EE (extended essay) exercises the academic skills. Even if not assessed conventionally, these three components at the heart of the IBDP hexagon (Figure 1) are of paramount importance. They help students receive a holistic education and prepare them for tertiary education and life from different perspectives, as explained below.

The Extended Essay (EE) is a four-thousand-word paper that needs to be written following a two-year research project in an area of the student choice. It is a means to get students learn the basic research and thesis-writing skills, while enhancing their capacities to analyse, synthesize, and evaluate knowledge, instilling in them the skills for self-

sufficiency and self-discipline with guidance from a supervisor. This has great value in preparing them for university-level papers and research.

The Theory of Knowledge (TOK) is essential to the philosophy of IBDP. It is a trans-disciplinary course tying together different subjects and all sorts of knowledge with the same question, “How do I know?” Thus, its aim is to create reflective people who become aware of their own prejudices as a first step toward intercultural understanding. There are no examinations or assessments in TOK, but the students need to submit an essay displaying their deep understanding of a topic of their choice from a list provided.

The extracurricular Creativity, Action and Service (CAS) component enables the students venture into their fields of interest and discover the limits of their creativity, while remembering the human values and the need for good citizenship through service activities. While they are required to be actively involved in the CAS activities, they are also asked to reflect on their deeds by keeping a journal entry. CAS also creates opportunities for students to connect with the real world and have different experiences that will cause them to question their old values and arrive at a new awareness.

The IBDP structure is shown in Figure 1 below (Thompson, 1988, in Hayden et al, 1995).

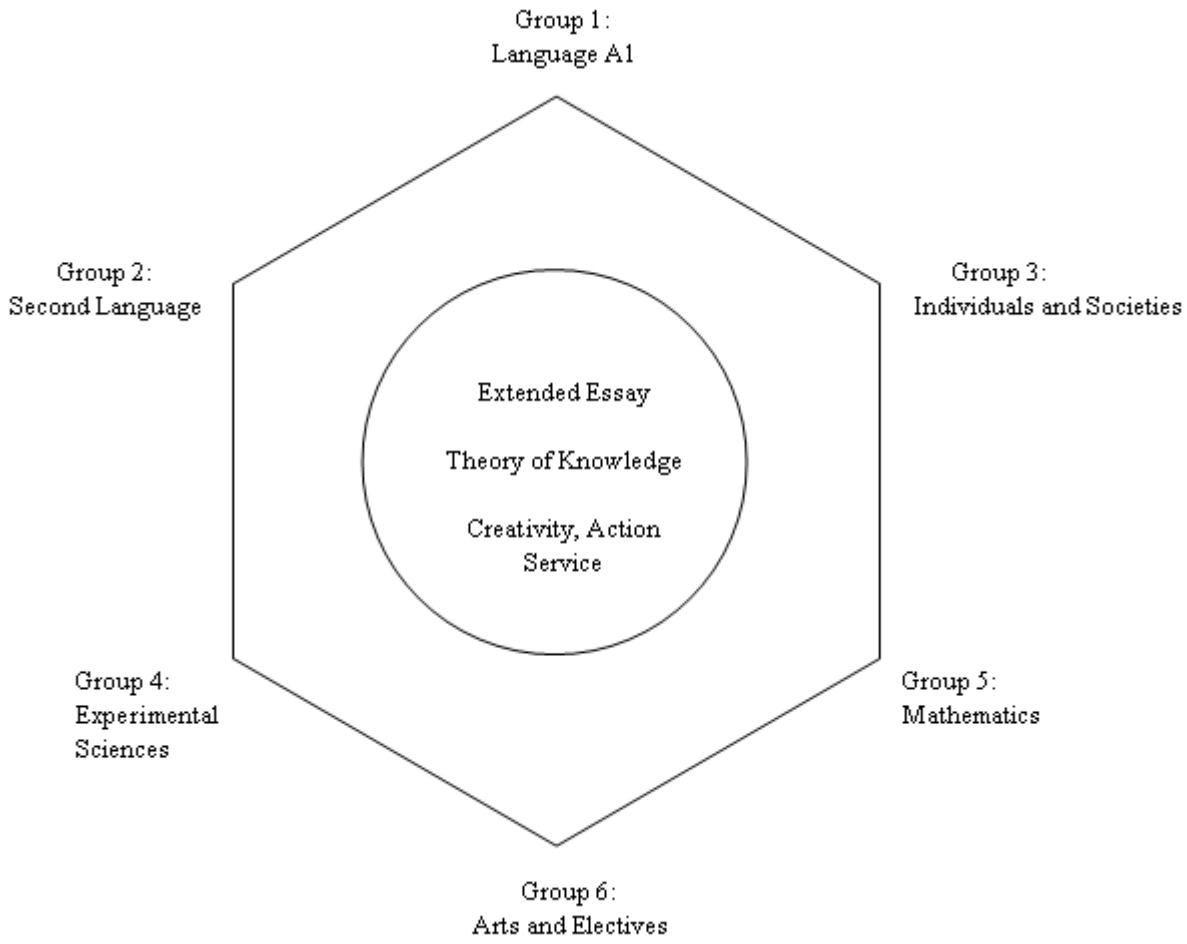

Figure 1. The International Baccalaureate Diploma Programme

The six corners of the hexagon indicate the six core areas or groups. (See Appendix III for details about each group.) A student will choose one of the courses offered under each group. Three of the six core areas have to be taken at Higher Level (HL), studying the subject in depth and allocating 240 hours. The other three then will be taken at Standard Level (SL), allocating 150 hours. Students who successfully complete the EE, TOK, and CAS requirements, and also receive passing grades in the six subjects, are awarded the IB diploma. However, if they fail to complete any one of these, they receive certificates for those subjects in which they have attained passing grades. For those students who do not want to do the full diploma, but who want to take only the courses in which they are interested, there is a Certificate Option. These students are not required to fulfill the core requirements EE, TOK, or CAS. Two of the six core areas are languages, indicating the emphasis placed on internationalism and communication skills among people of different nationalities.

Balanced Spread

A significant feature of the IBDP is its balanced spread. In a sense, it resembles a basic college liberal arts programme in the United States. In addition to languages, every student has to have some science or social science and mathematics, no matter what his or her natural inclination, which means they will have a well-rounded experience in six different areas of life. What is left up to the students' choice is the depth of study. By deciding whether they want to take a course at higher level (HL) or standard level (SL), they can have some choice of depth and specialization. They can also take a subject of their own choosing in the elective area, which, however, may jeopardize the balance if the student does not choose arts.

The pressure of university acceptance policies has forced IB to compromise from what they have negotiated to be the ideal balance of course distribution. The situation in Turkey, with pressure from the University Placement Examinations and early specialization caused by tracking, has similar causes and justification. It follows that universities and high school curriculum planners should in fact collaborate in order to produce the skills and values needed for life beyond the university years.

> "The ideal in terms of balance has thus been tempered by recognition of the need for a certain amount of pragmatism in allowing students the opportunity for some specialization if they are not to be disadvantaged in applying for university-level study." (Hayden, 2006: 138)

Assessment

One of the major reasons why IBDP enjoys a reputation for high international standards is its assessment policy. During the programme students are assessed internally according to the criteria provided by the IB organization, but at the end of the two-year programme, all students take final examinations that are evaluated externally by examiners from all over the world who have been trained by the IB organization. To ensure validity, reliability, and fairness, special moderation processes are formulated to check grading by the teachers and examiners. The final examinations are given all over the world on the same dates in May and in November (the latter generally for the Southern Hemisphere schools), and results are announced in early July and January, respectively.

The grading is criterion-based, on an ascending scale of 1 to 7. If students achieve a minimum of 24 points 3 additional points may be awarded for the EE and TOK) out of 45 possible points, they are awarded the diploma. If they do not attain the minimum, they will only be able to get a certificate for each subject completed successfully.

THE KOÇ SCHOOL CONTEXT

The Koc School, founded in 1988, has a total enrollment of 2000, almost all Turkish. The faculty comprises 300 teachers, approximately 70 percent local hire, and 30 percent expatriates. At least ten different nationalities are represented among the foreign hires, according to the school's hiring policy. About half of the Turkish staff is bilingual in Turkish and English. There is a foreign general director, but the rest of the administration--deans, directors of the elementary and high schools and the assistant general director--are all Turkish.

Modeled on the best-known foreign schools in Turkey and strongly supported by the Koç Family's Vehbi Koç Foundation, the Koç School grew rapidly and developed its own identity and model. Bringing the International Baccalaureate Diploma Programme (IBDP) into Turkey in 1994 provided a major multicultural boost and transformed the school. The Koç School's new identity was approved by the Turkey's Ministry of National Education with the proviso that the school continue to offer courses required for national students by the Constitution, such as the History of Revolution, Religion, and Ethics. In addition to having their children gain the idealistic global perspective expected from an international education, parents of the Koç School want their children to have opportunities for mobility in higher education and later in business.

Curriculum Design

In the bilingual programme at the Koç School, Social Sciences, arts, and physical education are taught in Turkish; while second language, mathematics, sciences and IBDP electives such economics, business management, ITGS, Environmental Sciences and Arts are taught in English. Then there is the requirement of a third language course. Either French or German can be taken as an elective for IBDP or as a national requirement. Thus, the

students study approximately 12 different subjects in a 39-period week, plus extracurricular activities. Approximately 30 percent of the students graduate with double diplomas, the TNEP and IBDP. 100 percent of the graduates head for universities--approximately 40 percent abroad and 60 percent in Turkey. Most of those staying in Turkey attend universities where the language of study is English.

	TNEP	IBDP
General Organization	Full 4 year programme (college prep) quantity Spiralling-repetitious Breadth (10-15 subjects) imbalanced (track system)	2 year programme (college prep) quality Spiralling-not repetitive Depth (6 subjects:HL, SL) Balanced (no tracking)
Subject Structure	Compartmentalized chronological Overload :10-15 subjects	Compartmentalized, but contains interdisciplinary elements : (TOK, Group-4) thematic 6 subjects
Pedagogy	Implicit (minimal teacher support material) Rote, teacher-centred Outcome oriented Knowledge-based Content-coverage	Explicit (syllabus plans, teacher support material), student-centred, in-depth analysis (higher order skills, labs) Process oriented Constructivist Connectionist Skills-based
Assessment	Traditional and test type, internal, no moderation	Varied, alternative, criterion-based, moderation to ensure validity and reliability, external, central

Table 1: Comparison of TNEP and IBDP.

The students who choose to do the IBDP are under additional pressure because they are undertaking a lot of extra work on top of a very demanding national curriculum. If they are undecided about where to go to university, they apply to universities both at home and abroad. This is an extra burden, but keeps options open until the last minute--which sometimes can be a matter of whether or not they can get a scholarship, or whether or not they will be able to get into the school of their choice in the highly competitive Turkish University Placement Examinations. Many of the Turkish schools start IBDP in the tenth

grade with a pre-IB programme. Although this helps to alleviate the workload, it presents some problems. Even if some of the content can be spread over three years -- for example, some of the novels could be studied earlier in the language courses -- the assessment for IBDP cannot be carried out any earlier.

Leadership Role in Turkey

As of 2008, there were twenty-three IBDP schools in Turkey, most located in Istanbul. As the pioneers of the IBDP in Turkey, we had to do a lot of experimentation, and then mentored the staff of the new schools adopting the IBDP. From time to time, especially during the busiest times of the school year, this has created considerable extra work for the department heads and the IBDP coordinator. However, it is also prestigious, and a source of recognition of our leadership in the field.

After obtaining approval for the new programme from the Ministry of Education, we were asked to play the lead role and secure approval on behalf of all the IBDP schools in Turkey. That required massive amounts of coordination and teamwork. In particular, being the lead school for the Turkish Social Sciences (TSS) School Based Syllabus brings with it major responsibilities vis-a-vis all the other schools implementing the TSS. However, there are also advantages in collaborating with the other IBDP schools. We meet monthly, share our problems, and work together for solutions. That means being able to apply collective pressure on the relevant authorities. Another advantage is the ability to have joint IBDP trainings to cut down on teacher training costs.

Merging the Two Programmes

Although the IBDP and the Regular (non-IBDP) sections are separate, the syllabi for the core courses are similar. Take mathematics, for example. Although the material covered may be similar, the two programmes are quite different in methods. In the Turkish National Education Programme more conventional methods are used. For example, there is no allowance for using calculators in class. The belief is that the student should by rote practice learn and be able to compute first without the aid of such tools. Students are not allowed to use calculators during the entrance examinations for Turkish universities.

Therefore, students planning to take those tests need to acquire the skills to perform at top speed without a calculator.

In contrast, students taking the IBDP, have to study Mathematics with a more 'Western' approach, giving more importance to process and skills than the result and speed. In the national exams, students may be given about 60 problems in an hour, while in the IBDP exams they will be required to solve perhaps two or three in that time span. As a result, a very good student accepted to one of the top Western universities may only perform moderately on the Turkish university examinations if s/he has not practised for speed in the cram courses. In contrast to his/her placement in the West, s/he probably would not be able to get a place in the first five institutions of his choice in Turkey. If it were possible, it would have been good to have some of the Regular (non-IBDP) students take the IBDP examinations at the very end in order to compare the effect of different types of preparation on test performance.

The same is true for all the sciences. There is a lot more laboratory work required of the IBDP students. Therefore, it becomes a challenge to find time in the weekly schedule to insert laboratory hours. The lack of necessary laboratory time in the national curriculum is a matter of a nation wide lack of facilities and materials to run efficient laboratory work. As a result, theory outweighs practical work in the national curriculum; without the laboratory work, more topics are covered theoretically. Converging such different methodologies becomes a challenge for the teachers.

Adjustments to the Programmes

To introduce the IBDP in the above described environment brought with it some trying adjustments, for the IBO, for the Turkish Ministry of National Education, and the Koç School. For example, thanks to the School-Based Syllabus (SBS) in Turkish Social Sciences (TSS), Koç students do not have to take similar courses twice. Since the Ministry of National Education requires that the Turkish "cultural courses" be taught in Turkish, the students would have had to study them as extras to fulfill Turkish requirements if IB had not approved this course. When designing the new School-Based Syllabus, the requirements of the Ministry syllabi were taken into consideration. Had there not been so many restrictions,

the task could have been much easier. The school administration had to satisfy both the TNEP authorities and the IB. The task was especially difficult when the requirements were in conflict. For example, in planning the SBS in TSS, the chronological content coverage of the Turkish curriculum made the IBDP's thematic, comparative, and inquiry-based methodology very difficult to realize because of time constraints. Trying to design the SBS with teachers who were used to being handed a syllabus with down-to-the-minute details was a gigantic task. I have a personal reflection related to this. When I gathered the teachers for the first time to explain what we were going to do, one of the most experienced and respected teachers in the team said, "This is not our job. It is the job of those up in the Ministry, and we implement what we are given." I was quite shaken, wondering how I could convince those with such set behavior, but in the end, this has been the agent of transformation for the Social Sciences Department, which was probably the school's most traditional department.

Recognition of the IBDP

Unfortunately, there remains a recognition problem, so the students still receive two diplomas when they graduate. Although the Turkish Ministry of Education allows the IBDP to be offered and senior officials speak highly of the IBDP, its diploma is not yet recognized as equivalent to the Turkish diploma unless the students complete some compulsory courses in the Turkish programme. The heavier load for IBDP students in Turkish IBDP schools causes some of them to opt out of IBDP.

One of the reasons for the lower performance of our IBDP students when compared with their counterparts in international schools or other national systems is the fact that our students in effect have to please two masters. Since all the students are Turkish, normally they are candidates for the Turkish diploma and all are successful. This makes the IB diploma somewhat redundant, so dropping out of the IB programme in theory is not a very big deal. On the other hand, when students drop out after their university acceptances have been announced, it becomes an ethical dilemma and a source of tension between those seniors and the school administration.

For many years, in order to help overcome this problem, our counselling services tried to help students make early decisions about university choices (home or abroad) and to advise

them whether to take the IBDP or the TNEP. This was because students studying for places in Turkish universities had no tangible rewards while being burdened with the extra requirements of the IB programme. The IBDP schools in Turkey have been working to get some tangible benefits that would serve as incentives for taking on IBDP as an additional programme. Slowly such efforts are bearing fruit. The public universities have no freedom to determine their own acceptance regulations and have to adhere to the rules set by the Higher Education Council (HEC or YÖK in Turkish). On the other hand, private universities began to realize that IB diploma holders are much better prepared, so they are trying to attract more IBDP graduates with some scholarships.

Abdullah Atalar, the Provost of Bilkent University, a prestigious institution in Ankara, presented a statistical study at an educational conference in Ankara in 2003. In the survey, he compares the grade point averages (GPA) of students who entered Bilkent with very high examination scores and those of IBDP graduates, whose entry scores in general are lower. By the end of the second year, they tend to equalize; by the end of the third year and in the fourth year, the GPAs of the IB diploma holders are noticeably higher. As a result, Bilkent now encourages IBDP graduates and allows them to double major or transfer between departments, which is not easy in other Turkish universities. Other private foundation universities have now started to compete to attract IBDP graduates, usually offering scholarships. As a result of such innovations, the number of students who take the IBDP is increasing among those headed for Turkish Universities, thus helping to justify efforts to merge the TNEP and IB programmes.

IBDP and Regular (Non-IBDP) Classes

When the IBDP first started at the Koç School in 1994, students were not allowed by the school to get certificates in any subject area. It was an either/or choice regarding the full diploma. If the certificate option was free, many students would have opted for it, and the balance of the IBDP curriculum could have suffered and it could have become more like the Advanced Placement programme in practise. However, the students and the administration soon discovered that there was not much logic to this approach, as those who did not fulfill all the requirements automatically became certificate students. Some students wished to take only certain certificates because of their genuine interest, but they could not do so because of the policy.

Even when the programme is fully convergent, Koç School teachers still prefer not to have mixed groups because they can adopt their teaching more easily to the aims of a homogeneous group, so for practical reasons, as much as possible, they are placed in homogeneous groups, even if the course content is the same.

Precautions against division within the faculty were taken by rotating the teaching assignments between IBDP and TNEP sections. If they do not teach an IB section one year, they do the following year. This helps all of them to familiarize themselves with different approaches and better comprehend the philosophy and general needs of the school. As a result, merging the two programmes becomes easier.

The Effect of Creativity, Action, Service (CAS)

Actually, the CAS component of the IBDP is one of the most important interstitial constituents, as portrayed in Thompson's metaphor for internationalism in an institutional setting. As its impact on the school culture is very visible, it helps create the school spirit and is thus the mortar between the bricks, the academic courses of the programme (Thompson 1998). The Koç School students also initiated the first international CAS Conference for students and their supervisors alike to share their activities with other schools in 2002. It has become a biannual IB-affiliated conference. By 2007, 150 conference participants from nineteen schools represented nine countries.

There were already many extra-curricular activities at the Koç School, but they lacked thoughtful organization, and the students were not asked to reflect on their educational and social gains as they did in the CAS of IBDP. So CAS became the school's general activity plan, which was presented to the Ministry both for approval and as a model for Turkey. As IBDP is only for the last two years of high school, it had to be expanded to all four years. Taking into account the schools with less support staff and resources and the emphasis on university preparation courses for the seniors, the required time was reduced to twenty-five hours for each component per year. Although most students go beyond these required hours voluntarily. The ministry adopted the model and made it part of the TNEP.

Convergent Curriculum - The Koç School Programme

Having had a global sense of the Koç School programme, let us have another look at the curricula of both the TNEP and the IBDP and the Convergent Curriculum once again before explaining the Research Inquiry I have undertaken and elaborating on Research Questions (see Chapter Four).

The Koç School's mission statement is below:

> **"**Koç School is a Turkish school with a global perspective. Our multi-cultural academic community, innovative methodology, and coherent K-12 bilingual programme engage all students in developing their intellectual and human qualities so that they will become confident, ethical leaders and responsible citizens of Turkey and of the world community."

The mission statement of the Koç School starts by declaring that the school is a Turkish school, emphasizing the national aspect. It is further defined as having 'a global perspective,' which is actually used synonymously with 'international perspective.' The importance placed on the global perspective and multiculturalism, and the goal of bringing up citizens and leaders for the world community as well as the country, is reflected with the bilingual programme, in Turkish and English, plus a third language, either French or German. In order to examine how the mission statement of the Koç School is enacted in the curriculum as a whole, it is helpful to review the categorization used by Bulman and Jenkins (in Hayden, 2006: 132-146): academic curriculum, pastoral curriculum, and hidden curriculum. Accordingly, the role expected of the multicultural academic community, (the faculty comprising of at least ten nationalities), is to bring in the global perspective. This is the objective of the *hidden curriculum,* to be fulfilled through teacher-student relationships. Having a bilingual education and an additional modern language programme in the *academic curriculum* also supports this goal of the mission statement. The emphasis on service through extra-curricular activities and CAS can be classified under the *hidden curriculum,* planned by the school to realize the goal of bringing up ethical leaders and responsible citizens in addition to the academic subjects, such as the religion and moral education required by the TNEP and by TOK, which is the requirement of the IBDP. The *pastoral curriculum* is taken care of by the school--working to meet the individual needs of

students and parents with university and career counselling services as well as psychological counselling. The roles of the IB coordinator, deans, and also teachers, who take on advisors roles for the development of their human and academic qualities, are also important for the *pastoral curriculum*.

For the convergence in our academic curriculum, each department studied the overlaps between the TNEP and the IBDP and reported that the major differences are usually not in the content but in the methods. In the language courses [Language 1: Turkish (A1), Language 2: English (A2)], where content is not strictly limited, the IB methods could be adopted easily to fulfill the TNEP goals. The third Language options: German or French are offered either as electives in the sixth corner of the IB Hexagon, or as an extra requirement of the TNEP if the students did not choose it as one of their IBDP courses since the school and the TNEP require that the students take two foreign languages, according to the 1997 Lisbon Convention.

The Mathematics department had reported that the curriculum overlap was 80 percent in content: IBDP lacks the strong geometry component, while the Turkish syllabus lacks statistics. The major difference in approach was the utilization of technology in IBDP classes, as explained previously. However, with recent modifications in the IBDP content, the overlap decreased making the difference greater.

Science courses present greater challenges because in the TNEP, all three sciences are required for the science track, while laboratory work for the courses falls in the elective category. Any science course taken with the elective laboratories can satisfy the IBDP requirements, but having to take all three sciences with their laboratories puts a lot of pressure on the weekly schedule and makes the programme imbalanced in favor of sciences because little time is left to take electives offered by other departments. In the social sciences, the problem of overload was solved by the School-Based Syllabus (SBS) programme approved by the IB organisation as an exception because it is studied in Turkish, and also by the Ministry of Education because they allowed for the merging of the separately taught two-hour courses (history, geography and sociology) to be combined into one Turkish Social Sciences (TSS) course with the comparative and thematic IBDP approach. However, curriculum balance is still an issue, because there is no physical science requirement for the social track.

The Extended Essay (EE) and the Creativity, Action, Service (CAS) components of the IBDP were also made compulsory for the whole school. The already existing Year Project could easily be converted into EE by extending it over two years, while the situation was similar for the extracurricular activities in the TNEP and the CAS of the IBDP. The resulting Koç programme was something like what is represented in Figure 2 below. Thompson, creator of the original Hexagon (Figure 1) has nicknamed this 'The Fattened Hexagon'.

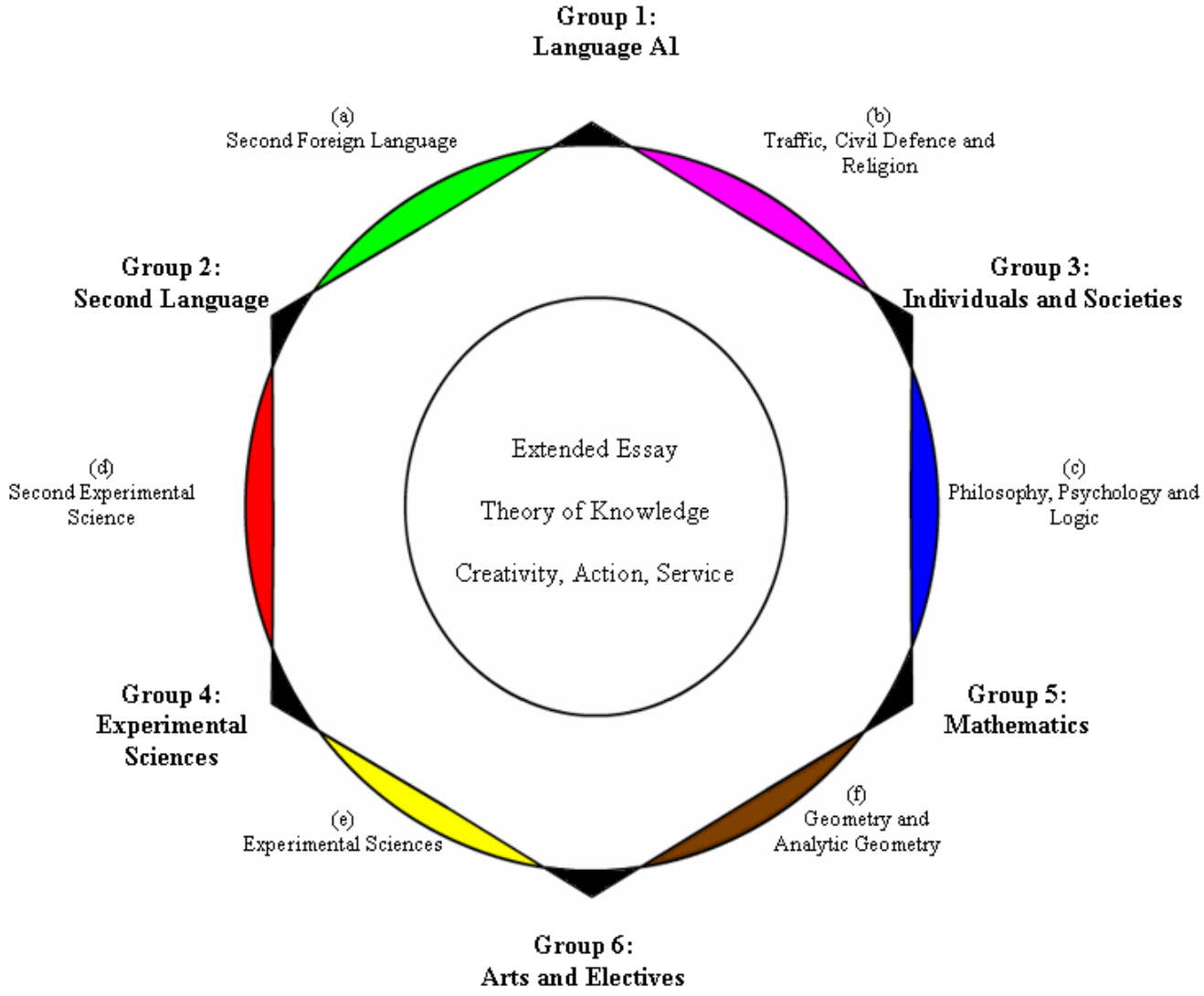

Figure 2. The Koç School Convergent Curriculum, shown as a 'circular hexagon' or 'hexacircle.' (adapted from Thompson's hexagon, in Hayden et al, 1995).

The circle represents the TNEP and the hexagon represents the IBDP. The Koç Programme is formed by the convergence of the two, the parts that are left outside of the hexagon, but within the circle are the extra courses required by the TNEP. These are described in detail in Appendix IV. When the Koç Programme is superimposed on the existing six groups of IBDP courses, it is quite clear that the load for the Koç School student is heavier than in the other international schools in Turkey. The Koç weekly Schedule appears in Appendix II. Fitting the IBDP and the TNEP programmes into a 39- period week requires a lot of skill on the part of the scheduler.

While working on a convergent curriculum, the school has to take into consideration all these elements, because the clientele wants to have all the best options at home and abroad. Then the question is: “Are we trying to be all things to everyone?” The ones who believe in the feasibility of convergence, push in that direction. With adequate support for resources, teacher training, professional development, selectivity in student enrolment, and good teachers, they believe it is possible. In the language and the social sciences departments, it has already been successful. The science and Mathematics teachers are interestingly more conservative if full convergence is achieved, it will also be a good example for those who accuse the IBDP of being too Western-oriented, as it will merge a traditional method with a more progressive (constructive) one.

As a step toward convergent assessment, mock IBDP examinations were given to both groups, and the internal assessment grades have been calculated with their national grades for their report cards since 2000. There was no reaction from either the students or the teachers, which signalled that in fact, the two systems have come together quite successfully. The other international indicator for us is that the TNEP students have also successfully gained university admission based on their Scholastic Aptitude Test (SAT) and Test of English as a Foreign Language (TOEFL) scores as our IBDP students. This is another indication that the education both groups receive does not vary much in essence showing that the programme convergence should not be a major problem in university entrance context.

The Koç School Student Body

The Koç High School students come from mainly two sources: the Koç Elementary and from central national examinations after eighth grade with very high scores. Students who do not know enough English for the bilingual programme take one year of intensive English as a Second Language (ESL) before beginning ninth grade.

After grade nine, students start specializing in their tracks and also start preparing for the university examinations. If the students are targeting universities in Turkey, most of them attend additional weekend courses or private tutors. Thus students who will apply to universities both in Turkey and abroad have limited social lives, especially in their senior year because of the extra requirements of doing both programmes. It may be that their being pushed so much causes expansion of their limits, which is called the notion of stretching by Vygotsky (Moore, 2000). Generally, graduates say they feel well-prepared for challenges in university and business life and this is verified by their achievements in higher education and in business life afterwards.

Faculty

Walker (2004: 199) states that "It is all about teachers and since, without good teachers, nothing will happen and not even the most imaginative curriculum will survive,..." Ireson, Mortimore and Hallam (in Mortimore 1999: 229) point out the importance of teachers, saying,

> "Whatever the age or stage of learners, it is clear that teachers are crucially important. They need to devote themselves to the needs of their students but must be aware they cannot do the learning for them. ... teaching is a highly sophisticated activity in which thousands of decisions are made in the course of a single day."

All educational writers tend to agree on the importance of the role of teachers in delivery of the curriculum. Securing their commitment is possible only if they understand and accept the basic principles and the philosophy underlying curricular decisions.

The Koç School faculty is two-thirds Turkish, approximately half of whom are bilingual in Turkish and English, and one-third international. The international staff comes from at least 10 different countries. This is quite unique in Turkey. In other private schools, the ratio of foreign faculty to Turkish is generally lower. At the Koç School, which claims to be a Turkish school with a global perspective as per its mission statement, there is a deliberate attempt to have teachers from around the world so that the students learn to understand, work with, and get along with people of different nationalities and cultures.

These teachers from different backgrounds are then expected to mingle, form teams, cooperate with the other foreign staff and Turkish staff, understand the system, and the curriculum, the needs of Turkish students and school culture, and then teach in a complex and unique setting. To help with the adjustment period, the school provides two-week orientation programmes for new teachers, both foreign and Turkish, at the beginning of each school year. Then each is assigned a mentor from his or her department. One month into the school year, they go on a weekend retreat so the administration can get feedback on their adjustment and answer their questions.

IBDP Experience and the Impact of Professional Development Opportunities

No effective in-service training or professional development programme exists after the teachers' graduation from college in Turkey. The in-service courses prepared by the Ministry are given by local shool directors or Ministry personnel, who do not have much up-to-date training. Caine and Caine (1991: 184) recount similar experiences in the United States, saying that even in the teacher-training institutions, "the education courses are usually taught by professors or graduate students, who themselves are educated in the traditional mode."

The teachers who start teaching the IBDP courses attend IB workshops, and their teaching styles thereafter change dramatically as a result of the curriculum and the progressive trainings provided to aid with implementation of the programmes. The role of the IBDP is undeniable in the dynamic changes ongoing at the Koç School, where there is now collaboration among teachers and support from the administration for improvement of teaching methodologies and programmes. In the IB pamphlet, the importance of teachers is recognised and stated very clearly, as quoted below:

> "We value our hard-earned reputation for quality, for high standards and for pedagogical leadership. We achieve our goals by working with partners and by actively involving our stakeholders, particularly teachers…. The International Baccalaureate views its teachers as essential to the success of the school-learning community. (IBO, 2007)

The popularity and respect enjoyed by IB programmes worldwide may be due to this recognition and on-going collaboration with practising teachers. There is continuous flow of feedback to and from teachers online especially after examinations. This open communication and transparency facilitate improvements to the programme and quick problem-solving. In the same way, teachers are invited constantly to assist with curriculum revisions. This differentiates IBDP programmes from the typical top-down national curriculum planning.

Implications for Hiring

Foreign Hires: In recruiting foreign faculty, the Koç School (as with all other Turkish Schools) is constrained by the appointment specifications of the Ministry of National Education (MNE). The teachers must have a Bachelors degree in the fields in which they will teach, a pedagogical training certificate, or three to five years of experience. Those with postgraduate degrees and experience with the IBDP are preferred.

The existence of an IB programme helps in attracting qualified international teachers. In Turkey, the number of IB Schools went up from one to twenty-three in ten years (1996-2007), and, a larger market is developing for IB teachers in Turkey.

Local Hires: Turkish teachers also have to have academic degrees in their subjects. In addition, knowledge of English is a desired prerequisite even if they are not going to be teaching in English. This facilitates communication in meetings, teacher trainings, and collegial and social exchanges at school. If they will be teaching in English, the degree of fluency is almost as important as their content-area knowledge, and these criteria create difficulty in hiring.

Effects on Turkish A1 Teachers

When the Koç School introduced IBDP in 1994, experts were brought in to give workshops to the faculty, and some faculty members went to workshops abroad However, for IB courses taught in Turkish (i.e. Turkish A1 and SBS Turkish Social Sciences), the circumstances were different.

As there were no workshops elsewhere for Turkish A1 teachers, experts were invited to the school for training. IBDP booklets needed to be translated into Turkish, and collaboration with the English Department was set up to share information on literature teaching with the IBDP methodology and Extended Essay writing issues. The best part was the inclusion of all of the teachers in the department in these trainings. This helped spread the IBDP culture and methods quickly within the department and created a dynamic and open climate. Now, these teachers serve continuously as a resource for the other IB schools in Turkey. The department head, in particular, is sought out to give workshops at the new IB schools. Input is also provided into the new educational programme reforms in Turkey and the IB influence, especially in teaching methods is visible. The closer the TNEP and the IBDP becomes, the easier it will be for the Koç School teachers to implement the convergent curriculum without worrying too much about the ÖSS (University Placement Examinations).

The Effects on Social Sciences Teachers

When the IB programme was introduced at the Koç School, the Social Sciences Department remained outside the scope because those subjects had to be taught in Turkish according to the TNEP. As a result, until the School-based Syllabus (SBS) was developed, the Social Sciences Department was unaffected by the ongoing changes in the other departments. They were all monolingual teachers, lagging behind in a manner not fitting the schoolwide progress in curriculum development. Together with the IB Coordinator, the Social Sciences Department head and a committee of teachers started working on designing the SBS. When the entire department requested regular professional development sessions from a social sciences professor, the administration provided this service regularly. While they were working on the programme, the administration started negotiations with the Ministry of Education simultaneously. Within about three years, the Turkish SBS was ready. As we continued to develop the programme, other IB schools started using it, sparking an enormous change in the methods employed in teaching these subjects. As the

they were desperate for new materials and resources (much as the TOK teachers had been), the social science teachers started producing their own materials and thereby became increasingly skilled in using technology. Now, it is one of the Koç School's most advanced departments in using technology in class, and the teachers are continuously asking for more resources as well as more bilingual colleagues in their department. IBDP must be given credit for the changes in the Koç School Social Sciences Department.

Effects on Mathematics and Science Teachers

The teachers of the Mathematics and Science Departments at the Koç School are made up of bilingual national local teachers and foreign hires. Unlike their colleagues in the Turkish and the social sciences departments, they can benefit from IB workshops abroad. Each year, about three or four teachers from each department are sent to IB workshops and are expected to share the new information with their colleagues. The availability of resources for such trainings is a source of attraction for teachers committed to professional development.

In addition to the workshops organized by the IB organization, the heads and coordinators of the IB schools in Turkey meet monthly to discuss issues and work on making their programmes better. Costs and duties are shared for providing translations of IB materials and resources, organization of conferences and workshops.

Towards Convergence: The Role of Teachers' Styles

In this study, the focus is on the teachers' styles in order to understand whether the International Baccalaureate Diploma Programme (IBDP) makes certain pedagogies necessary, and whether this pedagogy changes according to the subject area. 'Style', which is a difficult word to define is used synonymously and interchangeably to describe teachers' behaviour together with other words such as methods, approaches and techniques. This chaos in terminology will be expanded upon in the next chapter.

As a whole, curriculum is a huge topic, and whether the curriculum and the assessment requirements of the IBDP programme dictate the use of certain approaches to teaching will be important to learn for the expansion of professional development for teachers. Therefore, in addition to a general description of our attempts for a convergent curriculum

at the Koç School, whether the teaching styles of teachers who teach both the IBDP and the Regular TNEP sections change is investigated in the following sections.

CONCLUSION

In conclusion, remembering the main emphasis of the mission statements and goals of the TNEP, IB, and the Koç School, the fundamental similarities seem striking. For all three, human qualities are as important as the academic ones, if not more so. Internationalism introduces intercultural understanding, a multicultural community, and a global perspective for being citizens of the world community. Understanding that others can also be right is an important common characteristic. Active, responsible citizenship of one's nation and the world and being constructive in creating a peaceful world are parallel goals of learning in these systems.

With so much in common in the philosophies, the differences in the challenge of creating a convergent curriculum need not be insurmountable. However, the human side, the effect of the teachers' approach to the matter of convergence is of utmost importance in bringing together two different styles of teaching. If we can make it work, it should be a culmination of our experiences and expertise in teaching.

CHAPTER 3: THEORETICAL AND PRACTICAL PERSPECTIVES ON PEDAGOGY

PEDAGOGY AND TERMINOLOGY

Many experts who have examined and written about education have commented regularly about its complexity. One of the reasons for this complexity is caused by the unclear, inconsistent, and interchangeable use of pedagogic terminology. Watkins and Mortimore (in Mortimore 1999: 1-17) define pedagogy as 'any conscious activity by one person to enhance learning in another'. In everyday usage we do not hear this term used often. Instead, the phrases 'science of teaching' or the 'art of teaching' are used frequently to reflect the way the user sees the teaching profession: as science, emphasising the method; or as art, emphasizing the style. For Kelly (1987), in education, values are more important than knowledge; and individual judgment takes precedence over factual know-how. Therefore, education is an art as well as a science."

As pointed out by Marland (1993) a third category that is important in the conduct of the lessons is the management aspect of the profession. He calls this 'craft' and explains that it is "independent not only of subject, but also of mode (style) of teaching. Whatever you are teaching, and however, you plan to teach (method), you must run a good classroom" (Marland, 1993: 6). No teacher will disagree that to be able to carry out one's science or art, one first must establish order in the classroom, which is a skill that all teachers need to master.

Eble (1988) gives recognition to the pleasurable side of learning and therefore associates it with play. He believes that "teaching is an improviser's art." However, disapproving the pretentious aspect of associating it with art and because of the fact that it can be taught, he says it is also 'an honest craft'. He does not believe the myth that "Good teachers are born only." He is of the opinion that they are more 'made' than born. Stern (1963: 433) quotes Anatole France (1918), also emphasizing the fun of learning:

> "It is only by amusing oneself that one can learn. The whole art of teaching is only the art of awakening the natural curiosity of young minds for the purpose of satisfying it afterwards; and curiosity itself can be vivid and

> wholesome only in proportion as the mind is contented and happy."

France (1918: 198) is of the opinion that, "Those acquirements crammed by force into the minds of children simply clog and stifle intelligence. In order that knowledge is properly digested, it must have been swallowed with a good appetite." Stern (1963: 433) further quotes the Lebanese poet Kahlil Gibran (1929): "No man can reveal to you aught but that which already lies half asleep in the dawning of your knowledge," which is in line with the educational ideology of romanticists such as Rousseau that schools and teachers should "create a permissive environment in which innate qualities can unfold" (Deal and Nolan, 1982: 29-49).

Deal and Nolan (1982) have tried to develop a framework by building a conceptual map that incorporates educational philosophy and organisational theory. As schools are influenced and defined by ideologies reigning in the culture at large, and these in turn influence student-teacher relations, approaches used by teachers, curriculum content, organisational structure and life in school, they have set out to identify four educational ideologies: (1) the 'school as a filling station' ideology is the traditional organisational model, originating from the classicists such as Plato and the Jesuits who see 'kids as empty vessels'; and (2) the schools as a greenhouses' ideology originating from the romanticists such as Rousseau and Neill and the organisation is described as the 'do your own thing' school; (3) the 'school as a tool' is the 'revolutionary' school organisation, originated by revolutionists, where kids are seen as social change agents; and, finally, (4) 'school as a marketplace', originating from the progressives such as Dewey as the 'negotiation school' organisation. They say that these ideologies are very seldom found in their pure forms but generally exist in synthesis. Seeing this framework as a whole may provide a frame of reference in future discussions, as these or similar phrases and metaphors are encountered often to describe the ideologies and philosophies of education at schools.

'Pedagogy', which is supposed to be the all-encompassing 'umbrella term' in educational literature is called a 'contested term', "… the conception of which has become more complex over time" (Mortimore, 1999: 1-3). Other pedagogical terms such as *approaches, methods, style, strategies, and tactics* are very common, and they are used quite loosely and interchangeably in English. The interchangeable and imprecise use of these terms is possibly the reason for confusion in educational literature and discussion. For example, Jarvis tries to clarify the distinction between method and style, pointing out that in 'method' there is mention of 'plan', the task is carried out

according to a plan, while in ‘style’, the emphasis is on ‘attitude, “Teaching methods are about the technical processes of teaching while teaching styles are more about teachers and the way they conduct themselves during the teaching session.” (Jarvis, 2002: 24).

Mosston (in Mosston and Ashworth, 2002: 1-4) speaks of an educational ‘tug-o-war’ and calls this ‘versus approach’. He is referring to the educational fads that seem to come and go ‘in opposition to the status quo’. His ‘non-versus’ system (The Spectrum) is in fact an eclectic view seeking to unify all the fragmentation due to lack of consistent terminology and the cyclical approach that seem to be the unchanging character of the profession over centuries. Ashworth (in Mosston and Ashworth, 2002: 3-4) clarifies that “the terms *style, method, approach* carry the same meaning: decision patterns that define *the teacher’s and the learner’s actions so that a prescribed set of objectives can be accomplished.”*

Masterman calls education “a multiple paradigm science” (1972: 74) and Burns (1995: 91-96) finds the word [paradigm] useful because it not only depicts the way in which something is conceptualized or viewed but also includes the whole package of beliefs, values, attitudes, and practices that goes along with that view. According to Bisset (2001: 1) the term ‘paradigm’ has become a very loaded one. It “operates like a set of lenses or beliefs through which our perception of subjects or of an activity such as teaching are filtered.”

Squires (1999: 2-23) finds “the term ‘paradigm’ is particularly apt in an educational context, because it accommodates some of the complexities of the relationship between abstract formulation, practical activity and cultural context that characterize the field.” He narrowed these down to seven—namely, teaching as a common sense activity, teaching as an art, teaching as a craft, teaching as an applied science, teaching as a system, teaching as reflective practice, and teaching as competence. Each one of these has its own strengths and limitations, and they may be appropriate to use for different purposes according to teachers’ choices. There are links and overlaps between and among them, and they may be used eclectically, drawing from those aspects according to specific needs. However, Squires also reminds us about the limitations, pointing out that,

> “If teaching were a matter of common sense, why do we find bad or incompetent teaching? If it is an art, why is it a (relatively) mass activity? Can an inanimate metaphor like craft really illuminate a human process? How can it be an applied science

> when there is not much science to apply? How can the messiness of teaching be accommodated in the notion of a system?"

According to Broudy,

> "The immediate goal of *pedagogy* has been to incorporate the results of instruction into habits of speaking, thinking, acting and feeling with the hope that they would function reliably in adult life. In short, the practical justification of pedagogy is the promise of transfer. Discerning the logical connection between what is taught and its future use, and the method that actually establishes the connection, constitutes pedagogy's theoretical justification" (Broudy, in Gage, 1963: 4)

Any teacher would share the above as the goal of his or her teaching with a yearning, that s/he wished it were true for all their students. While making their plans, the teacher's goal is to instil in the students the habits and tools of mind that will help with their future survival and success. How many teachers have been heard complaining in great frustration that their students act as if they have completely forgotten what they had been taught in the previous years? The topic of so many faculty meetings is how to teach in such a manner that the students will see the natural connection between different subjects. Endless discussions take place about the methods employed with or without success to achieve the transfer of knowledge and to overcome the compartmentalized organisation of curricular designs. Looking into the historical development of the educational methods is reminiscent of the dialectical nature of the pedagogical problems over the centuries.

If the teacher is consciously designing the learning activity, then s/he will be taking into consideration the needs of the students. As a result, the same teacher at the Koç School who would be preparing the students for different types of assessment in the end, i.e. the IBDP examinations on one hand and the Turkish University Placement Examinations (ÖSS) on the other, will be designing the classes with the end goal in mind.

Research has led to a recognition that school context can influence pedagogy (Talbert et al., 1993, cited in Watkins and Mortimer, 1999: 6). Carlsen believes that

> "Teachers hold multiple representations of subject concepts and, in their teaching, select those based on their understanding of the context of instruction and their prior knowledge of what is likely to be effective for particular learners. So researchers into pedagogy not only endeavour to investigate how teachers organize subject-matter in their own minds, but are also interested in the teacher's ability to understand and apply the subject matter in different ways, according to the context of their classes, the sequence of their lessons, and their knowledge of the learning groups and individuals." (Carlsen, 1991: 115)

Based on this understanding those teaching different sections of a class will be adjusting their teaching according to the group. Hence, the IBDP sections at the Koç School will be getting a different type of instruction, from the TNEP group, aiming at a different type of assessment. As a big portion of the graduation requirement, IBDP students all over the world take examinations, prepared in Cardiff, UK, at the end of the two-year programme. The TNEP group, at the same school pass their classes at the end of the year just like in any other grade, and they are awarded their diplomas without any external examinations. However, the great source of stress for this group, who generally aim for university places in Turkey, is the extremely competitive University Placement Examinations, which are set up as multiple-choice tests that take place only once a year. When this is the reality, referring back to Carlsen's quote, the teachers automatically take the needs of their audience into consideration and vary their teaching accordingly. In this case, it may not be realistic for the school administration to insist on teachers' merging the IBDP and the TNEP syllabi and delivery of the subject matter using the same methodology in all sections in order to have a unified school culture.

Watkins and Mortimore (1999: 11) say that many teachers adopt lower-level approaches to teaching mainly by transmitting the syllabus and helping students accumulate knowledge because of external examination pressures or organisational constraints. In Turkey, teachers in many schools feel the pressure to 'teach to the test' because of the administration and the families' expectations. At the Koç School, although such pressures exist, there is an effort for the adoption of a more 'sophisticated conception of teaching' by offering the IBDP and trying hard for a covergent curriculum. This Research Enquiry attempts to see if, and how, the Koç

School context affects the way teachers apply their methods and techniques and their personal teaching styles.

Efforts towards a Basic Framework for Teaching

The American Educational Research Association (AERA) undertook research with the intention of preparing a *vade mecum* on teaching. The framework for the research had three major variables: central, relevant and site variables. The 'central variables' were those relating to the behaviours or characteristics of teachers, showing the centrality of the issue to the teaching profession. (Gage, 1963: 94-141).

In the same study, 'teaching methods' were considered as teacher's roles, such as 'lecturing' and 'the project method'. In the Koç School situation, where the TNEP curriculum and the IBDP are being merged, the qualities and the requirements of the two programmes affect teachers' decisions as to which roles to take on - or, in other terms, what methods need to be employed. While the content- heavy and more fragmented Turkish programme leads teachers to lecture more, the IBDP, which requires more critical analysis and more in-depth handling of the content, makes use of the more student-centred methods necessary.

It is explained by Gage (ibid.) that without doubt, it is very easy for the teachers to rely heavily on the textbook and treat it as a bible, especially if it is a textbook endorsed by an authority such as the national education department or the IB. When the textbook authors are treated as the guiding experts, their effect on the teacher may in fact be quite numbing in regard to making use of their own resources and creativity.

The third category of the central variables was shown as the teacher's personality and characteristics. "The teacher's behaviour is considered to be a reflection of his personality, a characteristic of teachers is some physical, social, or other non-behavioural property." (Gage, ibid.). Besides the central variables, *relevant variables* are grouped as: "(1) social interaction in the classroom and (2) the social background of teaching." These seem to be signalling the need for later works with educational psychologists and sociologists, and the developments in the educational methodology based on the theories developed by Vygotsky, which will be discussed later.

Philosophies of Education and Theories of Teaching

For teaching to be based on a single theory, generalization should be possible, and it should be able to "answer three questions: how teachers behave, why they behave as they do, and with what effects" (Gage, 1963: 133). Applied to the Research Question 1, they may be adapted as: How do the teachers teaching the same level, with the same syllabi behave in sections with differing goals and commensurate assessment models? If there is any discrepancy in their teaching approaches and styles, what is it and why is it? What are the effects on the students, and the school? However, Kelly (1986) claims that "there is more than one legitimate theory of knowledge and thus more than one acceptable and respectable theory of education."

In fact, the reason I undertook the Educational Doctorate programme after being a practitioner for many years was the deep urge I felt for validation of my practices as a teacher. I thought that if I refreshed my knowledge about the theory grounded in practice or the explanations thereof, the solutions to the problems in the school context may become clearer. Bigge's words confirm this.

> "Teachers who do not make use of a systematic body of theory in their day to day decisions are behaving blindly; little evidence of long range rationale, purpose or plan is observable in their teaching. Thus, teachers without a strong theoretical orientation inescapably make little more than busy work assignments." (Bigge and Shermis, 2004:5)

I would like to see if and how their teaching is influenced while fulfilling the requirements of curricula based on different schools of thought. If the way they teach does not change significantly, does it mean that they create their own convergent personal style? Would this mean about the attempts to create a convergent curriculum, merging the TNEP and the IBDP. Is convergence not a natural and logical result of offering the two programmes together?

The importance of the teacher's personality for the student is acknowledged since classical times.

> "Socratic Method is quite similar to psychoanalysis, beginning with casual questions and gradually showing students their ignorance. First the student became angry with the teacher and then at himself. The 'healing' could then begin when students were

> ready for self-examination. The students ended up becoming a disciple of the teacher and his doctrine. In such a student- teacher relationship the character of the teacher and what he teaches are inseparable." (Broudy and Palmer, 1965: 34)

Cecco (1968: 8-10) says, "a theory of teaching considers the behaviour of teachers, the cause and the learning of students, the effect." Liking the teacher has an important motivational influence on the students. Even if they are not initially interested in the subject, in order to please the teacher, they try to perform well and usually end up getting interested in the area. During my post-graduate education on Second Language Acquisition I was required to take Swahili. Initially, I did not comprehend the logic of this requirement and thinking pragmatically, I was convinced I had no use for it in the future. So I was not interested in the course. Then, the teacher factor came into play. When she taught the course, she embedded it in the African culture, with songs, dances, cooking. She was so enthusiastic and inclusive of every individual in the class, and she put so much effort into the activities that it felt rude not to participate, so I came to like the course and see it as a part of her. This experience confirmed Vygotsky's theories that claim learning and teaching are social activities and teachers do make a difference (Bernstein, 1996). One's theoretical understanding is expanded by personal experience.

Cecco (ibid.) also clarifies the use of philosophies of education:

> "Philosophies of education deal with goals and values educational systems embrace and propagate. ... Their primary concern is with ends rather than with means, and their importance lies in keeping us aware of the alternative goals of all our educational efforts."

So when school philosophies, vision and mission statements, the national or international education systems, such as the International Baccalaureate are discussed, the political aspects of education are the main emphasis. The ultimate goal is educating the kinds of persons and the types of citizens desired both for the country and for the world.

However, Kelly (1986) points to the fact that because of political concerns in official announcements about educational policy and in curricular provisions to which the teachers are subjected, there is no suggestion that the assumptions about education represent one particular view or ideology that they are exclusive of others. This view is confirmed in all the

pronouncements from the Ministry of Education in Turkey. Schools are expected to be apolitical places. All the explanatory speeches and official announcements emphasize the fact that the curricular decisions are based on 'scientific foundations'. Kelly, on the other hand, claims that the study of education can never be a scientific activity, and: "Its concern must be with conceptual clarity rather than generation of universal knowledge, and with assisting people to make sound judgments based on clear understanding rather than scientific applications of 'factual' knowledge." (Kelly, 1987: 26) IB organization has been explicit about their values, but until recently there was no mention of certain pedagogy. However, the style of the examinations naturally affected the methods of teaching.

In this age, having recognized the immensity of the flow of information available via technology and the abundance of factual knowledge, working on conceptual clarity as Kelly mentions above, or as Socrates sought to do centuries ago, has become a need that has to be recognised and put into practice.

Being unable to pin down educational problems or to have a clear conceptual understanding of their answers proven by precise theories may be inescapable. In dealing with a broad range of students and their individual situations, looking for such a theory may in fact be dealing with the absurd. This might be the reason why teachers are impatient with theory and are always interested in hands-on solutions that they can put into practice right away in their classrooms. Teachers attending workshops and seminars are generally not satisfied if they cannot leave with exercises that are relevant to their plans for their classes. However, to expect individual solutions to differing problems is difficult to achieve with mass education policies.

Arthur (1990 in Waldrop, 1992: 35-37) explains that the principle of "negative feedback is what underlies the whole neoclassical vision of harmony, stability and equilibrium in economy." Similarly, the goal of the national education for the whole country (Turkey) has been one of equity and fairness for the masses. Having a central university examination system is also the result of this policy. For IB examinations too, fairness and equity in application and assessment is an important issue, and measures such as moderation are taken to ensure fairness.

We could perhaps call it Nirvana if 100 percent literacy throughout the country was achieved with standard mass education policies as was projected with Turkey's national education reforms in the 1920s. Since then, the world has become more and more interdependent as a result of globalisation

that mushroomed towards the end of the twentieth century. External influences are immense, and the flow of information is unavoidable because of technological advances in communications in the twenty-first century. The IB programmes are looked up to as the answer to the needs of education for the twenty-first century. It requires changes in approaches to teaching, such as being process oriented versus outcome oriented, more paying more individualized attention to the student, and in return giving more responsibility for their own learning. The principle of respect to differences also receive favourable general acknowledgement. This is stated as "Other people, with their differences can also be right" in the IB mission statement (see Appendix I).

That is why working on creating effective models of teaching has become important with experiences enriched by the best examples from different models as it was done in the initial stages of IB curriculum building on the experiences of the past and trying to answer the complex needs of present day students.

Pedagogical Challenges and Teaching: Practices Developed in Response to These Challenges

There are many theories by scientists and philosophers who are classified by Lewontin (in Waldrop, 1992: 335) into two groups: Platonians, who see the world in equilibrium and that if it is slightly out of equilibrium it has to be corrected; and the Heraclitians, who pointed to the constant state of flux that the world is in as paraphrased by Plato as "You can never step in the same river twice." These early Greek philosophers exemplify the emphasis on process versus the product that still continues to be a problem. For example, implementation of alternative assessment required by the constructivist approach versus the classical examinations of the traditional type of assessment continues to be a problem. Some teaching and learning philosophies that highlight and help to explain the Research Questions of this Research Enquiry will be touched upon in the following paragraphs.

According to Moore (2000) the Positive Reinforcement Theory of Skinner (1953) focused more on teachers' behaviour towards students and its impact on the developing child. Teachers must work on the malleable and passive students to mould them into the desired behaviour. The roots of such attitude towards teaching and students lie with Plato and the Jesuits, known also 'as the masters of method' and the emphasis they put on the pastoral aspects of classroom management such as laying ground rules, which still finds common application and support.

Positive Reinforcement is a 'common sense' view of development based on conditioning by reward and punishment. It is very popular with the counselling office at the Koç School, encouraging the use of a reward system extensively for student motivation. They have developed a scheme to improve the students' academic and social behaviour with certificates of appreciation signed by school administrators. The downside of this theory is that it originates from laboratory tests dating back to Pavlov. This is the most criticised aspect of the theory, because laboratory conditions do not necessarily overlap with the natural classroom conditions. Academic criticism directed towards it in modern times is the emphasis on the right answer instead of the process, which may cause some students to shun risk taking. It also disregards the intrinsic motivation factor that is highly desired by educators.

Darwin's Natural Selection Theory talks about evolution (cited in Waldrop, 1992: 165) through which things get broader and more diverse in time. In evolution, the pay off is survival, in learning, the pay off is a reward of some kind such as food, a pleasant sensation or emotional fulfilment. Gell-Mann (in Waldrop, 1992: 257-259) worked on the Darwinian principle of relativity. Accordingly, evolution was a lot more than just random mutation and natural selection; it was also emergence and self-organisation. At the Koç School, changing ministry rules, regulations, reforms, IBDP rules, and programme revisions create constant challenges and the need for adaptation. The frustration level of the Western expatriate teachers, who are used to long-term planning, are higher when compared with that of the local Turkish teachers, who seem to be more accustomed to uncertainty, and therefore more flexible. The higher adaptability of the local teachers may be because of their familiarity with the system in which they work and live. This may be one of the reasons why expatriates tend to leave and go seek other places that they can fit better. Research Question 3 addresses the question of the implications for the professional development of teachers arising from the implementation of a convergent curriculum. An effective professional orientation program that takes these points into consideration will be invaluable for new teachers both to the country, to the school and to the school program, especially with a unique program such as the convergent curriculum.

Holland (1975: 262) explains that the evolutionary biologists have come up with a new word for this: 'co-evolve'. Organisms in an eco-system do not just evolve, they co-evolve. Holland, in trying to understand the paradox in evolution, says that the same relentless competition can give rise to another form of co-operation. In fact, co-evolution is a powerful force for emergence and self-organisation. From the co-existence of the two programmes, the national TNEP and the

international, IBDP, emerged the convergent curriculum of the Koç School and the success of our graduates is its proof (See Appendix XV- University acceptance list). Research Question 2 is about the feasibility of a convergent curriculum from a synthesis of the national and international. The figure below is a representation of this convergence.

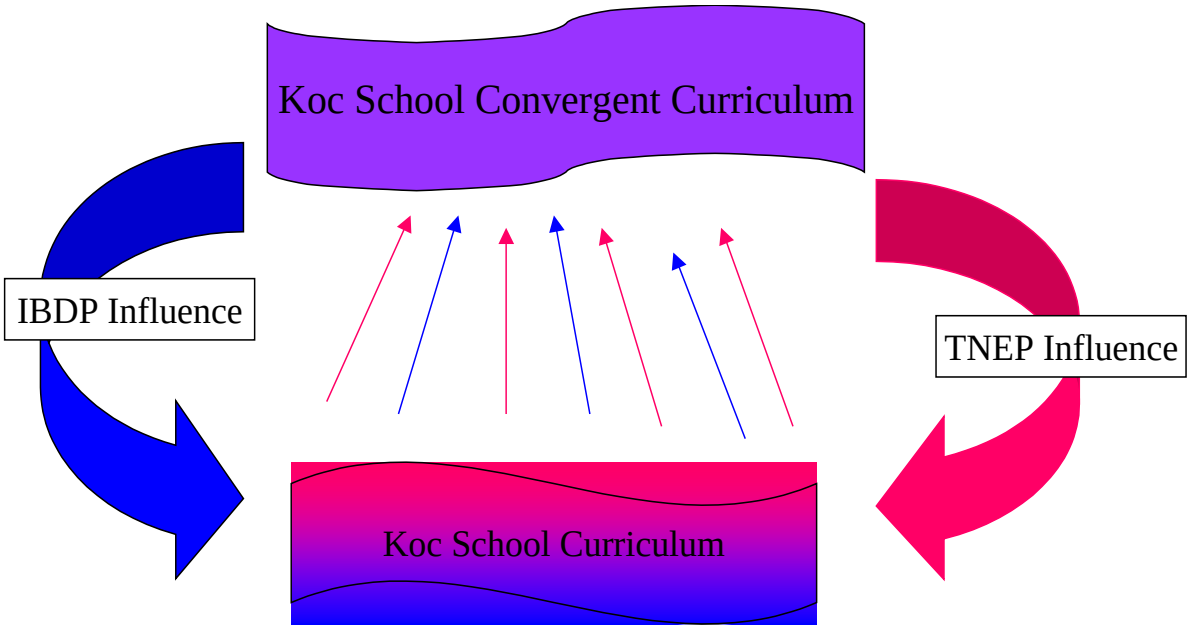

Figure 3 (Adapted from Morrison (2002: 10): Representation of the Koç School Convergent Curriculum

Both the IBDP and the TNEP are already complex systems catering to the educational needs of large numbers of students at both international and national levels. Fitting them together in a style custom-made for the needs of the Koç students according to the school's mission, gives rise to a more sophisticated, holistic programme merging the best of both worlds. The 'Low Level Elements' in Morrison's figure is replaced with the 'Koç School Curriculum' in the lower box; and the 'Emergent Structures' in the upper box is replaced with the 'Koç School Convergent Curriculum'. In this figure, the two programmes, with different properties, come together. Merging, they give rise to a new programme, which encompasses the properties of both the local (national) and the global (international) influences. It is therefore holistic and of a higher level.

The common framework at the school is the curriculum. To modify the system, the connections are not changed, but their strength is adjusted improving what already exists. Farmer et al. call this 'exploitation learning' (Farmer et al.: 290-291). This is usually the type of adjustment made by the Ministry in TNEP. For several reasons, especially economic and political ones, making changes that will upset systems that are beyond education, deep-rooted reforms are difficult to undertake. This kind of modification, called 'exploration learning' makes more radical adjustments in the system by ripping out old connections to a large extent and changing them with totally new ones. It is more risky, as both the loss and the gain can be big in such a change. This is what was undertaken by introducing IBDP at the Koç School and merging it with the TNEP. The risk taken was big, but the returns were also, making the school a model in leadership and helping it to acquire a new identity as an innovative leader in Turkish education.

Both Piaget and Vygotsky worked on what Barnes defined as the "central problem of teaching: that is how to put adult knowledge at children's disposal so that it does not become a straightjacket" (Barnes, 1976: 80). Piaget sees children as active problem solvers. Human beings are meaning-makers. They are actively in charge of their own learning. They learn through making connections with their social and physical environment making 'assimilations' or 'accommodations' that balance each other. This view also resonates with Rousseau (18th century) and Neill (20th century) philosophers and educators. The teacher's role is to identify their stage of readiness and set up appropriate learning activities. The weakness of the Piagetian approach is its generalization and mass application as well as its lack of individual solutions for the unique cases. Piaget's stratification finds easy application in the public school system, but not in private schools, where the clientele is asking for individualized attention. The answer to this weakness was found in Vygotsky's Zone of Proximal Development (ZPD)Theory.

The short-coming of the Skinnerian Standard Theory is that it does not pay enough attention to human psychology; Piaget's Staged Development Theory neglects individual differences. These have been complemented by the more recent ZPD and Multiple Intelligence (MI) theories of Vygotsky and Gardner, respectively. For Vygotsky, learning and teaching are social activities. The dialogue between the teacher and the student is particularly important. Piaget claimed that children will learn when it is the right time for them at their developmental stage. Rousseau and Neill also shared the opinion that children left to themselves would learn, and adults should not be in the way. In ZPD, on the other hand, the teacher's role in the student's life is very important, he

claims that with the teacher's help, students will learn much faster than when they work alone (Vygotsky, 1962, 1978); and, therefore, teachers do make a difference (Bernstein, 1996).

Within the Turkish national system, there is such a competitive race for attaining places in better schools, after elementary as well as high school, that there is no waiting for a time when the youngsters are ready for processing knowledge developmentally. There is an almost inhuman pressure on the students to outperform. If the family can afford it, they commonly send the students to test preparation courses or have tutors for them in addition to schoolwork. Because school success is also measured by the success of their students at university entry or high school entry tests, many schools bow to pressures from their students or families and their teachers adapt their teaching methods to accommodate such multiple-choice tests.

Turkey is not unique in this sense. The cram-school reality in the far-eastern countries such as Japan and Korea are other examples for this. "The American literature similarly asserts that 'teaching to test' and 'learning for test' are common reactions to formal assessment" (Mortimore, 1999: 224). In Britain, he observes a similar condition:

> "An increasingly common pragmatic – but nonetheless limited – view is that the sole aim of teaching is to improve learners' performance in those national assessments and examinations whose results are in the public domain and therefore are open to public scrutiny at home and abroad." (Mortimore, 1999: 214)

Based on their research Elton and Laurillard (1979) argue that assessment is the driving force in determining teaching and learning strategies. Even if there were no impositions from the ministry of education, at the Koç School, offering only IBDP, when approximately sixty to sixty- five percent of our students take the university examinations (ÖSS) in Turkey would not be addressing the needs to the students. This fact confirms Elton and Laurillard's argument. The driving force behind the secondary curriculum in Turkey is not only the national education programme, but to a great extent, it is also the ÖSS. Compared to the international schools with students from different backgrounds and options, having to compete at a three-hour test that can be taken only once a year, places a great strain on all the stake-holders, students, teachers and families and teaching to the test, and tutor-dependency become popular tendencies.

Walker (2004: 201) points out that:

> "Bruner takes over where Piaget left off… he says, there are developmental stages of learning linked to biological growth but children are growing up in a real environment, not in a laboratory, and the teacher's role is to build on existing knowledge using material that is appropriately structured, sequenced and motivating."

Theories of education developed in an attempt to complement or compensate for what was seen as deficient in the previous one. Piaget emphasized the cognitive aspect following the Skinnerian emphasis on the pastoral side with ground rules and rights and responsibilities and policies in classroom practices etc. reminding the Jesuits in some respect, while, Vygotsky saw the weakness in the social aspect of Piaget's 'Staged Development Theory and tried to complement it with his work in 'proximal development' theory. Following Vygotsky, Bruner has improved on the work of both Piaget and Vygotsky, looking at teaching and learning from a wider perspective, bringing in the cultural influences on the learner.

Walker (ibid.) thinks that Bruner bridges the gap between students' learning, and teachers' teaching:

> "To instruct someone … is not a matter of getting him to commit results to mind. Rather, it is to teach him to participate in the process that makes possible the establishment of knowledge. We teach a subject not to produce little living libraries on that subject, but rather to get a student to think mathematically for himself, to consider matters as an historian does, to take part in the process of knowledge-getting. Knowing is a process not a product." (Bruner, 1960: 72)

There is much to remind us of Socrates in the above quote reminding us of the cyclical nature of the developments over centuries. Walker says, "This is pure Bruner. But it is also pure IB – remember how our [speaking as the Director General of IB] mission statement refers to 'active learners and 'inquiring young people'. There is ample amount of cues for teachers from Bruner's emphasis on students being active constructors of meaning as in his statement, 'Knowing how

something is put together is worth a thousand facts about it.'" (Bruner, 1983: 183) The impact of these concepts is visible as the foundation principles of the constructivist approach of the IB. Another important contribution Bruner made to teaching methods was the introduction of 'the notion of spiralling' (Bruner, 1963, 1996). Gardner (2006: 20) explains this notion: "topics were introduced in appropriate ways early in school and then revisited with added depth and complexity, at later points in schooling." In the TNEP, there was an overuse of spiralling. The students covered the same themes in elementary, middle, and high school years with an increase in the content, as they grew older. The repetitiveness made it difficult for teachers to motivate all their students. With the 2005 reforms in the TNEP, this has been ameliorated. In the IB pedagogy there is more use of thematic approach and comparative techniques.

Bruner prepared a social science programme with a cross-cultural team, which received much acclaim at first, but later it was attacked as being elitist. Bruner accepted such criticism, saying that his curriculum would work best with well-prepared teachers working in schools with advantaged students. (Gardner, 2006: 21). Bruner's social science syllabus would have worked well in the IBDP schools, which are similarly accused of being elitist. What makes these schools better prepared to carry out programmes such as the Koç School's SBS in Social Sciences, is the professional support in teacher training and the interdisciplinary team work as much as the material resources.

Accusations for elitism caused Bruner to look at the impact of culture on school learning more closely. His later work resonates very much with the goals of the IBDP curriculum which tries to bring up responsible global citizens, and the CAS programme is virtually an attestation of Bruner's ideas. The real life experiences that students get through CAS touches them more than what is learned in the classroom environment and help to transform them.

> "What has become increasingly clear … is that education is not just about conventional school matters like curriculum or standards or testing. What we resolve to do in school only makes sense when considered in the broad context of what society intends to accomplish through its educational investment in the young." (Bruner, 1996: ix)

Gardner, who was inspired by Bruner's work, also furthered Piaget's work that saw children as young scientists by looking also at their artistic development and extended the research to more

general analysis of learning capabilities, which led to his development of the Multiple Intelligence (MI) theory and identification of eight different intelligences: linguistic, logical-mathematical, spatial, musical, bodily-kinaesthetic, interpersonal intrapersonal, and naturalistic (Gardner, 1983).

Kornhaber (1999) explains the wide popularity and effect of the MI theory on the practice of teachers as a validation of their daily experiences, reflecting the many different ways that students think and learn. She also adds that this has provided a conceptual framework within which educators can base their pedagogical practices, such as curriculum organisation and assessment, and she encouraged them to develop new approaches to meet the different needs of their students.

In spite of the popularity enjoyed by the MI theory, Gardner's main aim is on development of understanding. He states his educational vision: "Deep understanding should be our central goal; we should strive to inculcate understanding of what, within a cultural context, is considered true or false, beautiful or unpalatable, good or evil" (Gardner, 2000: 186). Gardner thinks that "these themes motivate individuals to learn about their world" (2000: 24). IB's contribution to this philosophy is the explicit international component, moving the understanding in cultural context to the next level which the globalisation makes necessary by means of intercultural comparisons.

According to Kornhaber (2001), Gardner's views are "at odds with the contemporary American trend to harness classroom instruction to broad, excessively detailed, and state mandated curriculum frameworks." This description sounds very similar to a lot of national curricula including that of the TNEP. That conflict is also what makes it difficult to merge the IBDP and the TNEP. However, there is no need for pessimism, as Nelson Goodman, the creator of Project Zero at Harvard, said, the way to help someone become more creative is to "Create obstacles, and make sure they are productive ones" (Gardner, 2006: 29). Surely, we all experience this and have become adept at proving our resourcefulness as schools and teachers, which may be an act of survival according to the evolution or co-evolution theories.

Although expressing the importance of curricular understanding has had great significance for Gardner for a long time, his more recent work is on the ethics of education. The question of values education has also been on the agenda the Koç Schools for quite a few years now. Walker (2002: 84) points to the fact that "in many schools today the values curriculum is no longer hidden; a deliberate attempt is being made to teach values. The reason is obvious: values are a much more powerful determinant of behaviour than any particular knowledge or skill." At the Koç School,

awakening to the need for such training took place with the introduction of the IBDP. While students were writing their Extended Essays, cases of plagiarism were encountered. The administration realized that it was necessary to train the teachers how to teach academic honesty to the students as an honesty value as well as a research skill. Gardner (2006: 234) emphasizes two values: responsibility and respect for humanity. He believes that "parents and teachers must embody a sense of responsibility in their own lives and seek to nurture a comparable sense of responsibility in all young people (Walker, 2006). In addition to agreement with setting role-models for the students, more deliberate pedagogical efforts are being made for values education. The new (2007) k-12 Counselling Syllabus in Turkey is an example for the understanding of this need as well as the influence of cross-fertilization and inspiration by one program on the other (RQ.2).

Einstein, said that so long as the two different patterns of gene activation were not too different, they would tend to converge. (Waldrop, 1992:110) According to this point, the Research Aim (RQ1, 2 and3) which set out to look at the relationship between the two programs during their co-existence at the Koç School, the IBDP and the TNEP, they could do so because they had quite a lot of overlapping content and considerable similarities. Using Einstein's terms as a metaphor, their gene combinations must not have been too different. In time, the culture of the school was influenced and the programmes started to converge giving way to the emergence of the unique Koç School Programme which also helped the school gain a unique identity (RQ2), and will be examined in more detail in the next chapters looking at the observations and their analysis.

CONCLUSION

Teachers' jobs are not going to become any easier by expertise or use of technology in this complex world. They will have to emerge from their comfort zones--which may be limited to their subject areas--and learn to deal with interdisciplinary themes and general ethical issues. A simple example might be the requirement to teach students about being respectful to intellectual property rights when doing research. As student-centred projects become a technique used in all courses, and technological advances put information at everyone's fingertips, teachers will have more and more obligations to teach responsible behaviour while using information, whether the teaching of such skills is in their field of expertise or not. The need to introduce an Academic Honesty policy at the Koç School before the country had copyright laws was because of the EE requirements. This is a good example of the pioneering effect of what education at the cutting edge can do.

Earlier in the chapter, the dualisms of education were mentioned, with the explanation that new theories emerged as a reaction to or antithetically to the reigning theories of the time. However, this does not mean that teaching is a polarized activity. It is actually multi-faceted and a very pluralistic. It can be described better as multi-dimensional. It involves the understanding of many relationships, which are not static and therefore cannot be explained by linear scientific approach. Looking at the theories relevant to our study in an eclectic manner can assist our understanding of the Research Enquiry. In the next chapter, the methodology that is used in this research to observe the teachers teaching both the IBDP and the TNEP sections of Year 11 classes at the Koç School will be explained. The aim of the study is to understand the complex conditions in which teachers teach and the effects of the convergent curriculum on their teaching styles and approaches. These observations can help us in predicting the measures that can be taken to cope with the demands of the type of education needed in our time and circumstances.

CHAPTER FOUR: RESEARCH DESIGN

In Chapter two, the research focus was introduced as a study of teaching methods and styles of teachers at the Koç School, with the research aim and the research questions as follows:

RESEARCH AIM

To explore the relationship between teaching methods and styles and the creation of a convergent curriculum merging the Turkish National Education Programme (TNEP) and The International Baccalaureate Diploma Programme (IBDP) within the Koç School.

Research Questions:

1. Are the teaching approaches used by those engaging both the IBDP and TNEP different in the different programmes?
2. Is the creation of a convergent curriculum from a synthesis of the national and international curricula by merging the IBDP and the TNEP feasible?
3. What are the implications for the professional development of teachers arising from the implementation of a convergent curriculum?

Terminology

Research design terminology used for defining research processes is as changeable as the pedagogic terms. Wellington (2000: 22) defines 'methodology' as "the activity or business of choosing, reflecting upon, evaluating and justifying the methods you use". 'Method' is further defined as "tools for data collection: techniques such as questionnaires and interviews" while attributing a more philosophical meaning to 'methodology', which usually refers to the approach and paradigm that underpins research. 'Paradigm' here "offers a way of categorizing a body of complex beliefs and world views" (Blaxter, Hughes and Tight, 2001: 59-60).

Addressing such complexity by a simple and one-method categorization would not have been feasible. Therefore, both quantitative methods (using a positivist paradigm with numerical data) and qualitative methods (which employ an interpretive paradigm) were used by accepting that the observer and his/her interpretation based on notes and transcripts are important. Wellington (2000: 17) says that "methods can and should be mixed".

Schatzman and Strauss (1973: 23) calls this ‘methodological pragmatism’ and state that the field researcher is a methodological pragmatist who will use any method of enquiry he/she deems fit for the purpose of explaining the problem. Thus, as Glaser and Strauss (1967: 17) state, “There is no fundamental clash between the purposes and capacities of qualitative and quantitative methods or data.” Layder (1993, 112) supports that contention by saying that qualitative and quantitative methods complement each other, therefore, characteristics of both qualitative and quantitative research are used in this study.

> “Qualitative researchers stress the socially constructed nature of reality, the intimate relationship between the researcher and what is studied and the situational constraints that shape inquiry. In contrast, quantitative studies emphasize the measurement and analysis of causal relationships between variables, not process.” (Denzin and Lincoln, 2000: 8)

As stated above, I, as the researcher, had a very close relationship with the context in which the study was located and knew the constraints of the situation resulting from the context -- for example, the constraints and difficulties faced in implementing the two programmes together, and trying to meet the demands of both the national and the international standards. I have taught the programmes and also have been through the ordeal of getting it started at the school and getting approvals from both the IB and the TNEP authorities. I wanted to have as objective data as possible from different perspectives in order to have a better understanding of our programme and to gather clues from the people in the sample group about possible improvements. As the researcher, I had a vested interest in objective results. The references below indicate that I had the right intuition in opting for an in-depth understanding at my school.

Lauder, Jamieson, and Wikeley (1998) state that to understand school processes and their likely outcomes of schooling, besides qualitative studies, in-depth case studies of individual schools or qualitative and quantitative research combinations may play an important role. In education, the notions of ‘practitioner research’, ‘the reflective practitioner’, and ‘the teacher as researcher’ (Schön, 1983, and Stenhouse, 1975, in Wellington, 2000: 20) are often used to point to such in-depth studies. The kind of research to which these concepts relate is naturalistic, with the advantage of carrying out research in a natural setting such as

the classrooms of the teachers (Wellington, 2000: 20). Case study is one of the research approaches of this type.

METHODOLOGY: CASE STUDY

Examining definitions by some theoreticians will clarify why a case study was chosen as the appropriate methodology for this Research Enquiry. According to Anderson:

> "A case study is a holistic research method that uses multiple sources of evidence to analyze a specific phenomenon or instance. Most case study research is interpretive and seeks to bring to life a case. It often, but not exclusively, occurs in a natural setting and it may employ qualitative and/or quantitative methods and measures." (Anderson, 1998: 152)

I would like to emphasize the adjective 'holistic' in the above description of the case study. A variety of methods needs to be brought together and integrated to get a realistic sense of what is taking place in the natural class setting, because it is a complex real-life situation with multiple dimensions. These characteristic make one think of ethnographic research. However, because I was not a newcomer on the scene, I did not want to be a participant observer. I was afraid that involvement in the lessons would not let me take notes on a schedule during the class, and thus I could forget some important details. If the observer is a participant, as in ethnographic research, there is the risk of missing 'the big picture'. Anderson (1990: 149) says, "The participant observer in ethnographic research joins in as a learner in the naturalistic setting and becomes socialized to the ways and processes taking place." As I am already an insider, and have a lot of knowledge, I do not fit this description, and my colleagues would not see me as a new person. As opposed to the ethnographic research situation, being a well-known insider, I tried to detach myself from the situation by being a non-participant observer and used semi-structured observations for greater objectivity as a researcher.

Wellington (2000: 94) states: "a case study can involve an appraisal or simply a 'feel for' the style and the ethos of an organization. This is something that can be gauged by intuition as by structured observation or interviewing." I believe that an insider like me can have this feel and intuition for a more on-the-spot interpretation of what the situation is and what is

taking place during the observations and likewise on the interpretation of the interviews, more so than an outsider with fresh eyes, as would occur in ethnographic research. An outside researcher would not have prior knowledge, and too much time would elapse until he/she could grasp the situation. This is why ethnographic research usually is done over long periods of time.

The definition by Yin emphasizes the real-life context, as all case study definitions do, and recognises the complexity by indicating the need for a variety of data sources and methods of converging them, making use of previous theory in analysis of new phenomena:

> "A Case Study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident…. It relies on multiple sources of evidence, with data needing to converge in triangulating fashion …; it benefits from prior development of theoretical propositions to guide data collection and analysis." (Yin, 1994: 13)

According to Creswell (1998: 249), "A qualitative case study provides an in-depth study of the 'system', based on a diverse array of data collection materials, and the researcher situates this system or case within its larger 'context' or setting." The natural context of this research enquiry is already described in Chapter Two as being set in the Koc School, situated in the larger context of Turkish national schools.

Cohen and Manion (1980: 181) state that case studies can establish cause and effect. Indeed, one of their strengths is that they observe effects in real contexts, recognising that context is a powerful determinant of both causes and effects. An example of this is the Koç School context, and the pressure put on the school programme because of conditions prevalent in Turkey. The fact that there is enforcement of national education requirements (such as some additional courses not a part of the IBDP), and that the extremely competitive university entry examinations cause some students to waver from taking the IBDP, prevents them from benefiting completely from what is available to them at the school.

Sturman (1999: 103) argues that a distinguishing feature of case studies is that human systems have a wholeness or integrity to them rather than being a loose connection of traits, making in-depth investigation necessary. Further, contexts are unique and dynamic; hence, case studies investigate and report the complex dynamic and unfolding interactions of events, human relationships and other factors in a unique instance. Therefore, case studies are suitable for investigating and understanding the nature of complex issues, such as those in education, especially where new systems are emerging due to convergent systems, as is in the case of the Koç School.

The reason underlying the attempts for a convergent curriculum is that the Koç School -- as opposed to the other schools in Turkey that implement the IBDP as an 'add-on' type of programme -- has the sensitivity for treating everyone equally, giving everyone an equal opportunity to benefit from what the school offers, both for students and for teachers. There is an absence of divisiveness and one-upmanship among those studying and teaching the different programmes, namely the TNEP and the IBDP. The students all have the same academic background prepared equally at the Koç School; they can all also apply for the IBDP and take the examinations for the programme and if they are successful they will qualify for an international diploma as well as the national one. What the school strives by converging the programmes efficiently is to leave the decision to the students whether or not to take an extra round of examinations, which are assessed externally. Otherwise, the educational goal is to be able to achieve an education of high standards that prepares the graduates for success in their tertiary education and with the knowledge base and skills to handle any type of assessment, be it classical or test type, to gain access to the university of their choice. This is the complex, dynamic and unique setting of the Koç School case study for this research enquiry.

While undertaking this research as a case study, I thought I could rely on the knowledge accumulated as a result of years of experience as a teacher, as well as a school head responsible for relations with the IB and the Ministry of National Education. As the school head, I had to obtain approval for the IBDP to be offered together with the TNEP. Such experience I hoped would help me in capturing the reality as Stenhouse (1975) points out: "Together these sources allow a 'picture to be built up of the case being studied which allows a piece of research to capture 'the texture of reality'" (in Wellington, 2000: 94).

On the other hand, Hammersley warns the researcher, for the sake of the soundness of the research, to look from the totally opposite perspective:

> "It is argued that if one approaches a phenomenon with a set of hypotheses one may fail to discover the true nature of that phenomenon, being blinded by the assumption built into the hypotheses. Instead one should begin with minimal assumptions so as to maximize one's capacity for learning." (Hammersley, 1990: 8).

I have tried to be very sensitive and cautious while observing and analyzing data. I have put great effort into approaching data evaluation objectively and not from either the IBDP or the TNEP perspective. By getting rid of observer bias due to subjectivity and selectivity, one can be more open and learn more from the experience. Is it really possible to have objectivity, consistency, and consensus? According to Fay (1996: 221) the answer is "No, if objectivity is interpreted in an objectivist fashion to mean 'as they are themselves.' But, Yes, if objectivity is interpreted in a … way to mean in an open-minded, responsive to evidence, accountable, criticism-seeking manner." This is how I have tried to approach this research.

An important reason for choosing to do a case study is being able to share the findings with my colleagues at the school, with the hope of increasing awareness and effectiveness of instruction, which is everyone's goal at the school. However, being a 'Prophet in one's own country' is listed as a difficulty when reporting or feeding back the research in Wellington's table of potential advantages and problems of a practitioner's research (Wellington, 2000: 20, Table 2.4). Wikeley's point below about involving the teachers in the research by way of observations and interviews can then be a counter-balancing factor for this problem.

> "Dissemination of findings among practitioners is enhanced. Carrying out research by reflecting on the practitioner's perception, occurring from their experiences on the issue of school improvement, is likely to increase the degree of ownership of ideas rather than seeing findings as an imposition." (Wikeley, 1998: 60-61)

Another reason for using case studies was the exploitability of their strengths, recognising the complexity and embeddedness of social truths, and easier generalizability because it is

in harmony with the researcher's and teachers' experiences. The case study can represent discrepancies or conflicts between the viewpoints held by participants, and can support alternative interpretations in order to minimise weaknesses as indicated by Adelman et al, (1980) and Nisbet and Watt (1984) in Cohen and Manion (1980: 184).

Probably the major weakness of case studies is the impossibility of arriving at generalizations because of the uniqueness or the context specificity of the issue under study. For example, in Turkey, the Koç School is the only school that is trying to merge two programmes. Beyond Turkey there may be others, but their national circumstances would be different, rendering each case unique to its context. This raises issues about external validity for problems of generalizability, but as long as it is internally valid, the results will be of value. Internal validity, which relies on the integrity of the researcher, has utmost importance. Wellington (2000: 99) says "This can be achieved by a reflective approach and the degree of 'openness' essential in allowing interpretation to be critically examined." This was why, during the interviews (see later), both parties were checking the interpretation of each other and notes were made in front of the informants so that they could express any disagreement they might have. Openness was a strategy used for ensuring integrity.

Roberts (1996: 147) holds the view that "The validity of a study needs to be assessed and judged by the reader, given his or her experience, knowledge and wisdom." The reader in that case has to construct the case in his/her mind, adjusting and adopting it to his or her situation to make sense of it. If there are any solutions in the findings for a particular context for which the case study is carried out, these are not transferable to other situations. However, the reader can be inspired to adjust the case to his/her situation and construct an individual case based on it.

Data-Gathering Instruments (Methods)

Questionnaires, along with observations, interviews, and document analyses are among the most frequently used data-gathering instruments. However, questionnaires are very impersonal, and teachers at the Koç School are tired of many such requests. They generally do not pay enough attention and abstain from allotting time to them. Therefore, instead of questionnaires in this Research Enquiry, observation and interview methods are used in an integrated manner to gather rich data.

Questionnaires are particularly effective for large sample groups to gather a lot of information quickly. However, this kind of data is usually superficial. As this sample group was quite small, an integrated approach of observations and follow up interviews where it was possible to gather more meaningful data by probing as necessary in a face-to-face interview.

Bartlett and Burton (2007: 42) indicate a major weakness of questionnaires as being the difficulty of composing questions about complex issues. As the researcher is not present to help with any necessary clarifications, it is necessary to be very specific. This is not very realistic for in-depth answers, and it may be quite difficult for the respondent to decide on one right answer and categorizations.

Document Analysis

Analysis of TNEP and the IBDP and the Koç School documents was used to set the scene for Research Aim. Wellington (2000: 108-110) categorises documents as primary (central) or secondary (complementary). In this research, the primary sources of data are the documents related to the observations and notes taken during interviews, including mission and vision statements, and other policy papers. Curriculum documents, explaining the integration of the national and international programmes in one convergent curriculum are also in this category., The Koç School and IB brochures, handbooks, policy papers, regulations, Turkish government statistical documents, BERA and other such documents both printed and online are examples of the secondary sources used.

Observations

In order to gather data for research questions, especially Research Question 1, about the teaching approaches used by those engaging both the IBDP and TNEP different in the different programmes, observations were of crucial importance. Patton (1990: 203-205) says observational data are attractive because they afford the researcher the opportunity to gather 'live' data from 'live' situations. The researcher is given the opportunity to look at what takes place *in situ* rather than second hand. As interviews take place after the observations, they may be tainted by the experience of the observations, but the observations will be giving fresh, 'live', independent ideas of what is really happening in the classroom.

Morrison (1993: 88) reiterates this idea in a slightly different way: “By being immersed in a particular context over time, not only will the salient features of the situation emerge and present themselves but a more holistic view will be gathered of the interrelationship of factors.” Repeating the observations over time, and insider knowledge-base provided deeper insights into different aspects of the topic. This helped with both the observations and the interviews in discerning the differences between the perceptions of the interviewees and what is actually happening in classes.

Different categorizations are used by different experts in regards to the standard approaches to observation. Bartlett and Burton (2007: 44) classify them as *overt* if the observer is taking notes in the room openly, and *covert* if the researcher is not noticed in the crowd or is in another role such as an assistant and is taking mental notes and writing them up later. Sometimes subjects may not know that they are being observed, which of course raises some ethical issues. Collins (1984: 55-56) divides participant observation into ‘unobtrusive observation’ and ‘participant comprehension’. Galton describes the process more technically:

> “Structured observation, as used to monitor classroom events, requires an observer to assign such events into previously defined categories. ...The three stages of the process therefore involve (a) the recording of events in a systematic manner as they happen, (b) the coding of these events into pre-specified categories, and (c) subsequent analysis of events to give descriptions of teacher-pupil interaction.” (Galton, 1988: 474)

The observation type used for this research inquiry is s*tructured*, because detailed observation schedules with different categories and columns that needed to be marked at five-minute intervals were used. It is a non-participant observation because the observer is busy with tallying. The detachment of the researcher may also help the teacher, and the class forget about an outsider in the classroom, especially after the first experience and go about their own business as usual, thus making the data more objective.

There are many advantages to collection by observations, such as the amount of data that can be obtained quickly and directly and the possibility of observing people’s behaviour in

their natural environment. This, of course, is subject to their not changing their attitudes because of the observer. This is why I gave importance to making it clear that this was research and they were helping me, and that it was in no way an evaluation of their performance. Other data that came out of the study was the difference between what they do and what they think they do. The findings about this difference can provide clues for the administration in making decisions. How much should they act on what they hear and what they observe, the value of different kinds of data gathering?

There are also some disadvantages or difficulties about this kind of data gathering. For example, recording what you see under time pressure is quite challenging. This is why I used five-minute intervals instead of three-minute ones. As Wragg (1994: 29) points out, "It can be quite tiring for the observer to tally every few seconds, especially if the schedule is long and complex." For the same reason, making complex decisions of categorisation was very difficult, and they had to be simplified as much as possible, almost to the degree of making no decisions. This is why complementary interviews are necessary. Then you can talk about what you have recorded, and this can help with your understanding of the situation and the underlying reasons for what was observed.

Interviews

The interviews for this research were integrated with the observations. They complemented the data gathered by observations and were instrumental in obtaining data for Research Question 2 about the feasibility of a convergent curriculum from a synthesis of the IBDP and the TNEP and Research Question 3 about the implications for the professional development of teachers arising from the implementation of a convergent curriculum. First, the behaviour of the teachers teaching both the IBDP and the TNEP sections in their natural environment at the Koç School were observed, and the way they interacted with their students was recorded on the observation schedule. Then they were interviewed to clarify their opinions and perceptions about what they were doing. They were asked questions that probed the reasons for any discrepancies between the two groups observed. In this way, the data-gathering comes from two perspectives: first through the eyes of the observer (the interviewer), then via an explanation by the observed (the interviewee) to the observer to clarify what s/he has observed. Using only one of these data-gathering methods would have made the Research Enquiry much leaner. Integrating them yielded much richer data for both the researcher and the reader to arrive at a better understanding of the circumstances.

In research literature types of interviews are named and classified in many different ways by the writers [see, for example, Smith (1972), Parsons (1984), McCormick and James (1983), Lewis (1991), Cohen, Manion and Morrison (2000)]. The term 'semi-structured interview' will be used in this research. Parsons explains it by saying: "The interviewer has 'considerable flexibility' over the range and order of questions within a loosely defined framework"(1984: 80). McCormick and James (1983, in Tilstone 1998: 51) describe it as the kind of interview that involves a carefully worded set of questions and predetermined responses to formulate their replies, which are then carefully noted by the interviewer. There will be some control by the interviewer, with some predetermined questions and guiding, but the interviewer will have the flexibility to modify the questions, explain them, and probe for further clarification to understand the thoughts, opinions, and values of the interviewee. "The degrees of structure will vary enormously within the framework, depending on the expertise of the interviewers" (Wellington, 1996: 27)

Kvale (1996: 125) points out that the interview is a social, interpersonal encounter, not merely a data collection exercise. He adds:

> "as the researcher is the research instrument, the effective interviewer is not only knowledgeable about the subject matter but is also an expert in interaction and communication. The interviewer will need to establish an appropriate atmosphere such that the participant can feel secure to talk freely." (Kvale, 1996, in Cohen, Manion and Morrison, 2000: 279)

Since interviewing, albeit for different reasons, has been a part of my job for years, and I have frequently received feedback that I was able to put the teachers at ease during interviews, I believed I could create a positive atmosphere for the sample group.

Tilstone says "Interview is a method of indirect observation ... which can provide information on motives, attitudes, values and belief." (Tilstone,1998). Potts is of the opinion that an important part of the interviewing process is the "exploration of meanings assigned by the interviewees themselves to the events and feelings they describe" (Potts, 1992: 335). Together, these two opinions give us the relationship of the interviewer and the respondent. It is not the interviewer making meaning alone; s/he is helping the respondent to make meaning and clarify his or her opinions during the process. Therefore,

it is a learning experience for both sides, but the researcher has to carry the enquiry further, complement it with all the other data gathered, and present the findings as a whole in the end.

Tuckman's (1972) review of interview procedures can be summarised as the interviewer should candidly and without bias brief the respondent about the goals of the interview and attempt to put the respondent at ease. S/he should then explain how s/he will record the responses. It is important that the interviewer should not affect the interviewee by his/her own opinions nor should s/he let the respondent deviate from the interview schedule or format, while not being inflexible and impolite (in Cohen, Manion and Morrison, 2000: 279). In this case, putting the interviewee at ease was very important because of my status as a top administrator. The interviews were held in my office because of convenience. Teachers did not have their own classrooms, and their offices were shared with their department colleagues, therefore there was no privacy. To soften the atmosphere, they were offered some beverages before starting the interview. To this end, I decided to treat them as 'critical friends' who would help me personally in my research as well as help our school programme by dissemination of the report in the end. I explained the aim of the research very clearly to the group prior to the individual observations and interviews, invited any questions, and asked their input and feedback about the observation schedule and then the self-reflection forms that gave a structure to the interviews. (see Appendix V and VI).

Self-Reflection Forms

In order to enhance the data gathered by observations and interviews to help with interpretation necessary for Research Questions 2 and 3, self-reflection forms were created. The document originally was called the teacher self-appraisal form, but to avoid any threatening connotations the name was later amended to teacher self-reflection form based on the feedback from the piloting. The self-reflection form aimed to make the teachers think of the influence of the programme they were teaching on different stakeholders; their relationships such as with colleagues, students, and parents; and comparative characteristics between the IBDP and the TNEP. The form was helpful in focusing the conversations on the styles and methodologies of the teachers and in providing information directly relevant to the comparison of the IBDP and the TNEP classes. They complemented the observation schedules, which focused only on class behaviour, by gathering information about culture created by the two programmes at school.

However, later in the analysis phase, a lot of difficulty was encountered in quantifying the comparisons, because they did not correspond to the observation schedule content. It was like comparing apples and oranges; therefore, it was not successful in providing numerical comparative data and had to be abandoned. Although they provided additional information for the interpretation of cause-and-effect relationships as well as many other details, new, retrospective interviews were planned and carried out using the observation schedules as interview forms.

Retrospective Interviews

Keeping the idea of the teachers' own reflections, teachers were asked to fill in the observation schedules bearing in mind their own practices in IBDP and TNEP sections. This was another instrument that aided the interviews while serving as a form of validation that Yin (1989: 132-42), and Robson (2002: 513) called the Comparative Structure Case Study: "Here, the same case is examined two or more times sequentially, each time in terms of a different explanatory or descriptive framework. The purpose was to demonstrate or to give the reader sufficient information to judge which of the explanations or descriptions best fits the data." In our case study, the comparative work was done with the sample group by showing them the results of the observation schedule marked in class and asking them to compare it with the form completed by them.

Merton (1990) lists the benefits of the use of a graphic representation of the original situation, which is the use of the observation schedules in our case: (1) to help the interviewee to recall, (2) to verify the reference to ensure that the interviewee and the interviewer are focusing on the same thing, and (3) to provide a common frame of reference for all the interviewees in the sample group. The teachers were asked to comment on any discrepancies between the markings by the observer and their own after they were asked to recollect the class with the help of the schedule. When the teachers were asked to comment on the differences between the two forms--the one filled in during the class and theirs during the interview--it helped them to think and become aware of the perceptions they held versus what was observed. They then had a chance to reflect on and explain the differences. As a result, both forms served to focus the interview.

Convenience Sampling

A convenience sample is a "sample that is selected because of its availability to the researcher. It is a form of non-probability sample" (Bryman, 2004: 538). Convenience sampling on a non-probability basis was the only option open for this kind of small-scale research, as Wellington (2000: 59) put it. My involvement and position at the Koç School were great assets. Convenience in getting support for access, obtaining the co-operation of the teachers that I knew, and overcoming some scheduling problems have made convenience sampling possible. Bryman (2004: 100) indicates that this may not be the ideal type of sampling, since "the data will not allow definitive findings to be generated, because of the problems of generalization, but it could provide a springboard for further research or allow links to be forged with existing findings in an area."

Two departments: Second Foreign Languages and Mathematics Departments representing different types of core areas in the curriculum with the highest number of teachers teaching both IBDP and Regular sections in the eleventh grade were identified. In each of these departments there were four teachers teaching both groups. Because the sample group was small for piloting, a teacher from the English Department took on the task of piloting for French and German teachers, and a science teacher did it for mathematics teachers. Thus, there were ten teachers to help carry out the observations and conduct the interviews at the beginning of the 2005-2006 school-year. However, about two months later, one of the non-Turkish teachers decided to leave the school reducing the Foreign Languages group by one fewer member and leaving the group with nine teachers.

It may be anticipated that the approaches and styles of the languages and the mathematics teachers would be very different. This was exactly why two different types of departments were chosen instead of selecting two more similar departments, such as Mathematics and Science or Languages and Social Studies. With different approaches, they could represent the whole better. A lot of the criteria on the schedule such as 'Addressing the Group' or 'Addressing the Individual' or those under the 'Teacher Behaviour' section, could be a matter of personality or personal style. With an open mind, I could also see not only whether or not there was a difference between the IBDP and the TNEP, but also whether responses varied greatly according to the subject area. Even if not generalizable, these could generate some ideas for further research.

Validity and Reliability

Wellington (2000: 30) says that both 'validity' and 'reliability' are hard to define, but he says, "Validity refers to the degree to which a method, a test or a research tool actually measures what it is supposed to measure." There is also a differentiation made about 'external validity' and 'internal validity'. Le Compte and Preissle (1984: 323) explains: "Internal validity is the extent to which scientific observations and measurements are authentic representations of some reality. External validity is the degree to which such representations may be compared legitimately across groups." This definition is very close to Wellington's definition of 'reliability': "a judgement of the extent to which a test, a method or a tool gives consistent results across a range of settings."

Reliability involves consistency in observations and can be attested by the replicability of the same study elsewhere. In a case study, the situation is unique to that specific context and setting, therefore we cannot speak about replicability externally. However, in our case, repeating the same observations over and over--for example, visiting the same teacher's classes more than once (although in different sections), with the same criteria and using the same observation schedule (structured observations) and then repeating the same for the whole sample group, is a form of establishing reliability. The more repetitive the data, the more is confirmation of reliability is attained. On the other hand, exact replicability of any class is out of the question, because students change and it is not possible to repeat the same lesson with the same group. Sometimes things can be observed that will be unique and particular behaviours that may not be repeated ever again, but they may give the opportunity to explain something very important. Given the unique conditions of the classroom environments, aiming for a high degree of reliability is difficult. Arranging for covering of the same material in both IBDP and TNEP sections has been a big constraint in the number of observations in this study. Adler and Adler (1994: 380) suggest that when the data obtained from observations seems to be getting repetitive, it means that a saturation point has been reached, and then it may be time to stop. In this case study, there is noticeable repetition in the observations and interviews with the self-reflection forms.

While carrying out the case study and working on the interpretations, the researcher needs to be extra careful and reflective, thinking of multiple interpretations, and if possible using multiple cases and methods. Roizen and Jepson (1985 in Wellington, 1996): "one important advantage of a study of cases is that the richness of the material facilitates

multiple interpretations by allowing the reader to use his own experiences to evaluate the data." The research serves multiple audiences." In order to provide such validity for the reader, the description of the case study and the analysis has to enable the reader to visualize and make meaning of the process and findings. Towards achieving this purpose, the implementation of the steps of the process is described thoroughly. After observing each teacher and interviewing those using the same schedules and criteria consistently, the findings for each teacher were summarized. Then, the outcome is compared and contrasted within the groups and across groups to determine the similarities and differences in the teachers' applications, opinions and styles. The consistency of the findings and repeating themes also serve for validation of the results.

Triangulation

The purpose of triangulation is to enable researchers to converge different sources of information to generate the themes, thus creating a strong basis for the findings of the study. The findings from one source of data can be tested against the findings of the other, and sounder interpretations become possible. Therefore, relying on multiple forms of evidence through the process of triangulation checks validity (Creswell, 2003: 249).

In the analysis phase, comparing and contrasting data used for triangulation also serves the purpose of validation. Comparing perceptions of teachers about what they do in the self-reflection process and the observation data is a form of cross-checking. In qualitative approaches, in order to overcome the limitations of one method or technique, it is critical that there be triangulation of data, which is "the use of multiple data sources, data collection methods and theories to validate research findings" (Anderson, 1998:131). Having two groups--i.e. the languages and mathematics teachers--and drawing evidence from two different subject areas, assisted understanding of whether teachers' styles and strategies varied much according to their subject fields or whether especially in areas such as 'Teacher Behaviour,' they were more personality dependent. Besides working with different groups of people, three different techniques are used in this study: (1) observations, (2) interviews, and (3) documents analysis. Different sources of data also served as a kind of triangulation.

(1) The observations were systematic 'simple observations,' using a standard observation schedule where the observer is passive and unobtrusive.

(2) During the focused/semi-structured interviews, the results of the teacher self-reflection forms as well as observation schedules completed by the observer were discussed with the teachers, probing for their interpretations and opinions about the issues.

(3) The documents: These are the forms mentioned above, notes taken during observations and interviews, and other documents from the school, the IB, and the Ministry of Education, that could facilitate a better understanding of the issues.

Ethical Issues

The reason for using convenience sampling was that the conception of the research was based on the availability the opportunity to use some teachers to gather information that could shed light on the research topic I wanted to understand. My long-time relationships and position at school created an opportunity for me to obtain the support of the school for the case study.

At the same time, I tried to take every precaution to avoid disruption at school. Teachers of eleventh grades teaching both IBDP groups and Regular (TNEP) groups were chosen for the study because in the twelfth grade there is added stress related to final IBDP examinations as well as preparation for Turkey's University Placement Examinations. Therefore, it seemed that eleventh grade teachers would have more time to collaborate with the requirements of the study.

I was very careful not to abuse the teachers by pressuring them into agreeing to participate. I have already explained how sensitive I was about putting teachers at ease during interviews and building rapport with them. The following comment emphasizes this aspect of involvement with the people taking part in the research:

> "In research where the researcher and the other participants come much closer, and are more deeply involved with one another, the personal and social implications become far more complex. Ethical statements by people concerned with such areas of research start to talk about interpersonal ethics--the care with which one treats another equal person--and social

> ethics, the concern with the results of one's research and the unintended consequences which may ensue. This kind of research actually makes a difference to people involved--all of them--and to ensure that horrible mistakes are not made is a duty." (Reason and Bradbury, 2001: 122)

Their consent and voluntary participation in the research was necessary both for ethical reasons and for the success of the study. The British Educational Research Association (BERA, 1992) Ethical Guidelines state that:

> "Participants in a research study have the right to be informed about the aims, purposes and likely publication of the findings involved in the research and of potential consequences for participants, and to give their informed consent before participating in research." (BERA, 1992: article 7)

This rule, as well as article 9, regarding honesty and openness in the relationship between researchers and participants has been adhered to in good faith.

IMPLEMENTATION OF RESEARCH METHODOLOGY

The individual phases of the implementation of the research design will be explained, followed by analysis of the data gathered in each phase namely, the piloting, observation, interviewing, and retrospective interviewing.

The Piloting Process

Anderson describes a pilot study as a small-scale study conducted prior to the actual research in order to test the procedures and techniques and data instruments (such as questionnaires) to see whether they work satisfactorily (Anderson, 1998: 11-12). With that aim, piloting of the observation schedule and self-reflection forms was done and then repeated, with changes made to the drafts until they were clear and satisfactorily practical. Thus, piloting of the semi-structured observations with the schedules and semi-structured interviews with the forms, which were seen as integral parts of the process, were

reflectively carried out with the pilot sample group. Justification for the decision made in the choice of the pilot sample is explained by Oppenheim (1992: 62):

> "In principle, respondents in the pilot studies should be as similar as possible to those in the main enquiry…. However, in rare instances in which our total population is very small and highly specific so that we cannot afford to 'use up' any part of it for pilot samples, we must seek some alternative samples that should be comparable in their knowledge and ways of thinking."

The sample-group specifications were definitely restrictive; They needed to be teaching both the IBDP and the TNEP sections of the same year group. They also needed to represent the different curriculum areas. After assessing the availability of numbers, the Mathematics and Second Foreign Languages Departments were chosen as candidates for the study because each of these departments had four teachers who fit the specifications. But to avoid 'using up' people from this relatively small group, pilots were chosen from other departments that would be close to the sample group in curricular characteristics. One teacher, coded TA, from the Science Department (a physics teacher) piloted for the mathematics group, and an English teacher, coded TB, from the First Foreign Languages Department piloted for the Second Foreign Languages (French and German) group. Both had similar years of teaching experience, but were quite new to the IBDP. They agreed to co-operate and provide feedback on the observation schedule and the self-reflection forms.

After each piloting session, an interview (a de-briefing session for feedback) was held with the teacher observed. Simpson and Tuson (1997: 19) advise researchers to check the interpretations of their observations with those of others who were present (in this case, it was the teacher whose class was observed) and reflect upon the implications of the differences between the observer's account and theirs. This was done in a very cooperative and collegial manner, and the piloting was repeated until the format of the data- gathering instruments i.e. the observation schedule for observations and the self-reflection form and interviews seemed ready for implementation.

Six of TA's classes were observed. Both the observations and the pre- and post-observation de-briefings were very useful. Because we had exhausted the structural questions while

piloting with TA, fewer sessions were needed with TB's classes. One IB and one Regular class of hers were visited. Being a language teacher, she was especially helpful with revising of the language of the self-reflection forms. She suggested changing the name self-appraisal form to self-reflection form for a more positive connotation and ensure that it was non-threatening for the teachers. The feedback appears in Appendix VI with the self-reflection forms. It also became clear that before the interviews started, it was necessary to clarify the instructions individually, answer any questions from the teachers, and let them correct or fill in the form then and there if they had any hesitation with any item.

Oppenheim (1992: 50) says that every stage of an enquiry must be linked to what is to follow and to what has gone before, ensuring the coherence and integration of the whole set of operations. This advice was followed for each step, except the final data reduction comparing the two sets of results from the two sets of forms. That weakness in planning made necessary an extra step, the retrospective interviews. The reasons for this are explained in further detail in the Self-Reflection Form Analysis section.

Development of the Observation Schedule

The prime sources consulted for the formulation of the observation schedule were Anderson (1998), Bell (1999), Hopkins (2002), Morrison (2002), and Wragg (1994). There were three drafts. The schedule was revised twice after the piloting to overcome difficulties in tallying and to eliminate overlaps. Changes to the observation schedule were made after pilotings on October 28 and December 6-7, 2005; March 21 and 24 and April 6, 2006.

After the initial two drafts, observations were conducted using the final form reflecting all the amendments indicated above. Space was provided for filling in demographic information, such as gender, experience, and education, which could be helpful in analysis to see whether these personal traits had any generalizable effect on the behaviour and personal style of the teacher and other factual information about the class. Then, there were three major headings: (a) *Teacher Talk,* (b) *Questions* (Ts, Tgr, Ss, Sgr), and (c) *Relationship with Students*. During pilot observations it became apparent that distinguishing the direction of the questions was difficult, (i.e. whether from the teacher to one student (Ts) or to the group (Tgr) or from one student to another (Ss) or to the group (Sgr)). It became clear that the only useful procedure during the fast pace of class observation was to jot down check marks, and that had to be simplified. As the focus

needed to be on teacher behaviour, the student dimension was eliminated. Trying to pay attention and not make mistakes in labelling who initiated a question, and who was the addressee complicated the task and created messiness on the chart.

The same was true for the Comments section: (encouraging, discouraging and neutral), which required the observer to write plus (+) to indicate encouraging comments, (-) for discouraging ones, and (n) for neutral ones**.** Although in theory it seems very simple, in practice, thinking about symbols slowed the process in the fast-paced classroom. Such differentiation was eliminated during revision.

The second version was piloted on December 6 and 7, 2005. The observation schedule now had four parts: (*a) Teacher Talk, (b) Questions, (c) Teacher Answers and (d) Teacher Behaviour*. Some flaws became apparent again during piloting. Item 6, 'encourages' under *Teacher Talk* and item 5, 'encouraging' under (*d) Teacher Behaviour* were repetitive. The confusion was corrected by removing the first one. On the other hand, two major types of *Teacher Talk* i.e., 'giving instructions' and 'explaining' had important differences of nuance and needed to be discerned in the final version. Therefore, it was better to spell them out, at the risk of lengthening the list. The subheadings were divided into such separate items as affirming, encouraging, discouraging, and neutral comments. This increased the number of items to eight, but it made them more discernible.

Originally, *(a) Teacher Talk* was also intended to cover the teacher answers, but in practice, too much was packed into that title. Making further clarifications with additional symbols or notes was taking time and confusing the observer. In the second draft, *(c) Answers* was added with two sub-sections: (1) 'addressing the group' and (2) 'addressing the individual'. However, during renewed pilot observation, this still seemed insufficient because the teacher sometimes was not only answering questions but also continuing with additional clarifications. Therefore, in the final draft, the title of the category, *Answers*, was changed to *Questions and Answers (Clarifications)*, to make clear whether the communication was with the group or the individual. The third section, labelled *Relationship with Students* (Relationship w/SS), turned out to be very problematic during marking. The name of this part was changed to *Teacher Behaviour* to focus on the teacher. The first item, titled *Physical (gestures)* was too general and needed to be divided into at least three items 'showing', 'drawing', and 'demonstrating.' Thus, the physical movements of the teacher in

the class could better be defined. During the piloting observations using the second draft, it became obvious that there was a need to add a few more columns describing basic teacher behaviour, such as writing on the board, walking around, reading, and checking. Because detailed categorisations and the need to use different symbols were eliminated, checking more items with tick marks became feasible. After the initial two drafts, the observations were conducted using this final form, reflecting all the amendments described above. (Appendix V.2)

Analysis of the Pilot Observation Schedule

Tick marks on every line of the pilot observation schedule were counted and recorded at the end of that line. The sums on both sheets - one for IBDP and the other for the Regular class for TA and TB - were transferred to a summary sheet, reducing the data for each teacher into two columns, which were then colour-coded systematically. The equal number of ticks on adjacent columns was marked in green; they were marked in yellow if the discrepancy between them was up to five and in red if the discrepancy was more than five. Then these were transferred to a side by side separate summary sheet for each teacher side by side so that the two groups could be compared easily on the same sheet to see if the teacher observed behaved similarly in the two sections while teaching. The summary sheet for the pilot group appears in Appendix VII.

Development of the Self-Reflection Form

The self-evaluation forms created by Landsdale (2000) were the inspiration for these forms, developed for the Koc School teachers to evaluate their own teaching styles and methods. They also functioned as a different data-gathering instrument for triangulation. They helped focus the interviews better because the teacher's first filled in the form by putting ticks in an ascending order from one to five, reflecting their opinions about the effects of the IBDP on them, whether they could feel any difference in their collaboration, attitude, and methodology used in the classroom, together with any pressures they felt while teaching the students in the TNEP and the IBDP. The self-reflection forms appear in Appendix VI.

Teachers were not shown the forms prior to the observation so that they would not be influenced by them, but they were told about the forms during the Initial Focus Group meetings. They received these forms immediately following the class observation, and they then had time to think about them and make their own tick marks before the debriefing

interview. This helped them to be prepared. Smith (1972: 20) suggests that there should be a 'rapport' between the interviewer and the interviewee that "should be the result of a positive, pleasant, yet business-like approach." In a sense, it was like joint research. This was important in order to guarantee that the recording of tick marks and interpretations was consistent. No tape or video recording was used to avoid making respondents feel uncomfortable. Instead, very brief notes that would serve as reminders were taken in a very transparent manner, making sure the respondent felt s/he knew exactly what was going on and thus felt secure.

The final form is in Appendix VI. Amendments suggested and made after the pilot interviews are as follows:

a- The name of the form changed from Self-Appraisal to Self-Reflection eliminating any anxiety it could cause.
b- Item 1: The title 'collaboration' became 'relationship' and a third column for relationship with parents was added.
c- Item 2. Pressure felt: column b) 'grades' was added.
d- Item 3: Attitude: c) 'discipline' was added to clarify class management issue and linguistically, the phrase 'bias toward' was replaced with 'to'.
e- Item 4: e: HW (homework) was clarified by addition of 'amount of'.
f- Item 5: Questions: a) 'amount' was replaced by 'Frequency'.
g- Item 6: b. linguistic correction: 'versatility' changed into 'versatile'.
h- Item 7: Creativity: did not exist in the first form and was added separately for the teacher and the student
i- Item 8: en extra empty column was inserted for teachers to add their own suggestions if they felt the need.

Most of the amendments were linguistic clarifications, with two major additions, 'creativity', and 'discipline', aiming to throw light on class management issues between the two programmes and the bias towards it. During the interview, if there was a need, the forms were reviewed, clarified, elaborated on, and amended.

While designing the forms, the planning of the piloting of the observations and interviews, the systemisation of the analysis, and the quantification of the data gathered were also planned, interpreting them in a complementary manner. The interviews provided very useful insights into the reasons for various types of teacher behaviour. However, while quantifying the outcomes, a problem arose. Data from two sources, (the observation schedules and the self-reflection forms) could not be integrated because the content was different. This last phase of the analysis was not piloted because all the attention was

focused on structuring the observations and interviews and the practicality of using them during the observations and interviews. Their individual analysis (independent of each other) was also carried out, but the final stage of integrating the two results was skipped. That proved to be a grave mistake, because during the analysis it became apparent that the two forms could not be compared because the self-reflection forms included questions about non-class aspects, while the observation sheets contained only what could be observed. Oppenheim (1992: 49) describes a similar situation:

> "The fact that these responses could not be classified or processed in any way only became clear long after the data had been collected on the main sample, and the question had to be abandoned. Moral: in the case of open ended questions, pilot not only the question itself, but also the coding and quantifying the process."

Oppenheim says that it is essential to pilot every question, every sequence, every inventory, and every scale in your study. In this case, the problem was not an open-ended question, as he mentions above, but a comparative investigation. The quantifying process had the same colour-coding scheme for both but content categories did not match. It was like comparing apples and oranges, and the whole form had to be abandoned. Oppenheim (1992: 50) warns researchers against such ghastly mistakes: "It is often very useful to run through the sequence of a survey enquiry *backwards* as part of the pilot work. The whole set of operations must be coherent and integrated, and a reverse pilot exercise will show up any weaknesses." The researcher has to be very critical of each question on the schedule, to see whether it is absolutely necessary and relevant to the research questions. Otherwise, some questions may prove to be redundant and therefore difficult to classify, or some work could need to be discarded in the end because it could be discovered to be irrelevant to the main questions, causing loss of time and energy.

Retrospective Self-Reflection Form:

For a comparative quantitative analysis, I had to redo the self-reflection interviews retrospectively, using the same observation schedule items, this time filled in by the teachers themselves, which made triangulation possible. Letting teachers do the comparisons and come up with justifications for differences served as validation of my own interpretations of their behaviour.

Keeping the idea of teachers' self-reflection, a new form was prepared with exactly the same content as the observation schedule, and the teachers were asked to fill it in for themselves, thinking of their own practices in the IBDP and TNEP sections. The teachers filled it on a 1-5 scale range, placing an 'I' for the IBDP and 'R' for the TNEP(R) programme in ascending order according how they saw themselves using the techniques in the respective classes. The colour-coding system that was used for the observation schedules was also applied consistently for the analysis of these forms.

These forms were used as a tool for comparison between what teachers believed they did and what behaviour was observed in the classroom. The observation schedule ticked during class observation was shared with them during the interview. They were then asked to comment on the differences between the two forms, this helped them to become aware of the perceptions they held and they had a chance to comment on the differences. As a result, both forms served to focus the interview on the research questions and give a structure to the interview, although the respondents were quite free to (or sometimes they were probed to) elaborate on points that could provide crucial information for the research. In the retrospective interviews, the observation schedule was used in place of the self-reflection form and filled in by the observed teacher instead of the observer. Then they were used for comparison of the two data during the interview. An example of the forms is in Appendix X.

ADMINISTRATION AND ORGANISATION

The observations and interviews were carried out with seven teachers from two departments representing different curricular areas, Mathematics and Second Languages. Their common characteristic was teaching both the IBDP and the Regular sections of eleventh graders. Five different nationalities were represented among the teachers. For the sake of anonymity in reporting, all the teachers were assigned codes according to their department, Mathematics teachers' codes started with the letter A and their pilot was TA; the others were TA1, TA2, TA3, and TA4. Likewise, the Second Languages group was given the code letter B. Their pilot was TB and the others were TB1, TB2, and TB3. TB4 dropped out before his observation because he decided to leave the school. Here is a brief

introduction of the sample group. There will be no detailed individual descriptions of the sample group to keep anonymity of the identifications.

The sample group from the Mathematics Department, represented by the code TA comprised of two local Turkish teachers educated in Turkey and two international teachers. Among them, they had an average teaching experience of 13 years; only one of them was new to Turkey and to the educational system in Turkey (TNEP). As for IBDP experience, for two teachers (one local and one international), it was their first year of teaching the programme. The other two each had six years of IBDP experience. There was very good camaraderie and teamwork among them, and they shared an office. In their interviews, they mentioned that the teamwork was more efficient among the IBDP group because they were a small group, while for the TNEP, the group was bigger and not all of them shared the same office.

The code for the Second Languages sample group, representing French and German language teachers, was TB. Two Turkish and two international teachers from the Second Languages Department had agreed to work on the Research Enquiry as the sample group initially, but, as mentioned, one of the international teachers withdrew. All three teachers were educated abroad. They were not novices to teaching, having an average of eight years of experience among them, teaching the IBDP was a new experience for all. The department head, had left, so they did not have anybody highly experienced in the team for consultation, and it was a year in which they were collectively figuring out what they needed to do.

With the first pilot and with some of the teachers in the main sample, the observations were repeated two or three times, but due to scheduling difficulties and many unexpected limitations that occurred during the school year, it was not possible to observe equal number of classes for all teachers. They were asked to invite me to both of their classes when they planned an active lesson, such as the introduction of a new chapter, not when there was planned prolonged individual work by students or quiz taking, because observing their interaction with the teacher would be very limited, and it would not be ideal for seeing much of the teacher's instructional style and behaviour. Therefore, for each teacher, one observation for each of the two separate sections (IBDP and TNEP) observed while

teaching the same topic was taken as the basis for this Research Enquiry. Such a requirement was one of the reasons that made scheduling difficult.

The observation schedule was used as the main instrument for the observation and the interviews. All of the observations were carried out in the teachers' classes, and the interviews and meetings took place in my office.

Implementation of the Observation Process

After the schedules and self-reflection forms were piloted and revised, group meetings were arranged and held separately with the members involved in the research in order to explain the goals to them. For ethical reasons, their permission was sought and they were told that they had no obligation to be involved, since it was a voluntary project to support research that might help us understand our educational practices better. Then the forms were explained. In the end, it was decided that I would wait for their invitations to classes that would be suitable for my purposes of observing teacher behaviour. Scheduling became challenging because of my other obligations at school and the teachers' full schedules. If one appointment was cancelled or a change occurred to the school programme, it was not always easy to arrange another observation soon because it was difficult to find suitable classes. Still, being an insider was very helpful for scheduling and rescheduling of observation and interview times. A researcher from outside would have been much more frustrated with too many intrusions.

During the observations, I was very aware of the Hawthorne Effect (Anderson, 1998: 128), that my presence in the room could alter both the teacher's and the students' behaviour for the soundness of the research. Other ways 'to be a fly on the wall', while observing includes not making any eye contact with the students and explaining to students the reason for one's presence (Simpson and Tuson, 1997: 56). I let the teacher provide the explanation and I conducted my recording of the observation schedules in a very unobtrusive manner at the back of the room, without being involved in the subject matter and without exhibiting any signs of interest in the students or the lesson.

The observation schedule included a brief demographic information section with the teacher's name, years of experience, education (whether abroad or in Turkey or both) the class observed (IBDP or TNEP), and the date. This section was filled in by the observer,

with only missing information added during the debriefing interview where necessary. See Appendix V.

It was essential to be particularly alert with respect to keeping time during the observation. At the beginning of each period, I looked at a watch and listed the time intervals on top of the blocks as sign posts. Besides deciding on the categories, sometimes it was difficult to decide on the duration of one type of behaviour whether to tick it once or twice, for example, if the communication between the teacher and the student continued back and forth. Having one person do all the observations was important for maintaining consistency in such cases.

After the class, the self-reflection form was given to the teacher, who was asked for an interview soon, if it had not already been fixed while arranging the observation.
The reason for giving the self-reflection forms after the observations, was to prevent any possible effect of knowing the content would have on the teacher.

Implementation of the Interview Process

The interviews had three parts. First, a brief warm-up occurred to put the teacher at ease, to thank him/her them for taking part in the sample group and to repeat the purpose of the study. Then, they were given a summary of the different phases of the study and asked if they had any questions or hesitations about the form; any clarifications needed were made. The second phase involved looking over the self-reflection forms together and elaborating on their own views presented on the forms to arrive at a more in-depth understanding of differences and similarities they felt between the IBDP and the TNEP. This presented an opportunity to learn about the personal meanings they attach to the complex class interactions and class dynamics, their interpretations of different factors influencing the students.

In the third phase, the observation schedule marked during the class was shared with the teachers and they were asked to provide comments about the reasons for the differences between the two groups. Further probing took place when a point was made that could help understanding of the differences or similarities between the IBDP and the TNEP groups. Teachers filled in the forms on a scale of 1-5. Later, the same colour-coding was employed

consistently. While going over the self-reflection forms, notes were taken about the reasons and justifications, and great deal of information was gathered.

CONCLUSION

In this chapter, the methodology used for this Research Enquiry--which is a case study because it involves a situation specific to the Koç School, in Istanbul, Turkey--is under scrutiny with an educational goal of arriving at a fully convergent curriculum uniting the national (TNEP) and the international (IBDP) curricula with the help of the findings of the research.

A multi-method approach has been utilized making use of some quantitative data with the qualitative, integrating the two and thereby triangulating data. The methods include observations and interviews, with a schedule for both making them semi-structured or semi-quantitative. The research design and questions, preparation of the schedules and forms, technicalities and realities of convenience sampling, triangulation, validity and reliability, and ethical issues relevant to the design of the schedules and forms, piloting and implementation have been covered in this chapter, setting the stage for data analysis in Chapter Five.

The major steps of this Research Design are summarized in Figure 4.

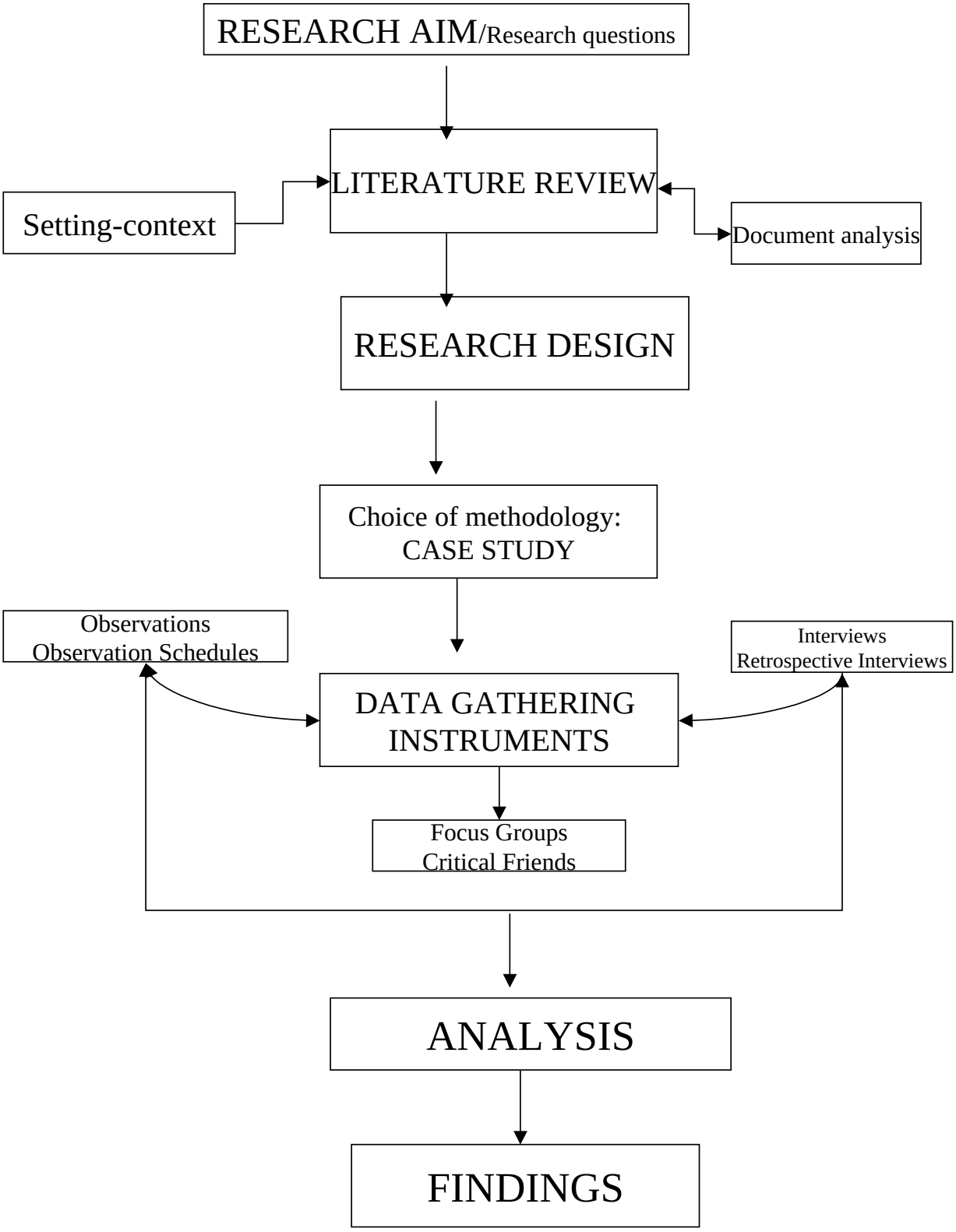

Figure 4: Research Design

CHAPTER FIVE: DATA ANALYSIS

There are two quite standard classical sources that were identified in the creation of a framework for analysis (Becker, 1958, and Glaser and Strauss, 1967). Becker's approach has a more linear sequencing, describing four stages, namely, (a) selection and definition of problems, concepts, and indices; (b) check on frequency and distribution of phenomena; (c) incorporation of individual findings into a model of the organisation under study; and (d) problems of presentation of evidence and proof (Becker, 1958: 653). Glaser and Strauss' is a more dynamic approach, using comparison all the time. It also has four stages: (a) data collection and initial generation of categories, (b) validation of categories, (c) interpretation of categories, and (d) action. (Glaser and Strauss, 1967: 105).

These two models are not contradictory and can easily be merged, thereby gaining a more useful structure. Analysis by merging a linear framework and a dynamic one was appropriate for a study on merging two educational programmes with similar approaches, the TNEP being more linear in design and the IBDP more comparative and dynamic. In this case study, after the initial steps of the sequencing of the data, analysis was carried out as outlined below:

a) Data collection, examining, and generation of initial categories or clusters of emerging concepts and characteristics;
b) Numerical examination and colour-coding to check frequency and determine importance by comparison of observation schedules and self-reflection forms, thus validating the findings in different methods used;
c) Interpretation of categories and the emerging patterns;
d) Summary of the findings and recommendations for action.

Analysis of the Observation Schedule

For each teacher, the number of ticks on each line of the two observation schedules (for the IBDP and for the TNEP class) was counted, added up, and recorded on the table indicating the totals for each category. In this manner, data was reduced to a summary sheet for each teacher, showing the sums of each category on the observation schedule. In a systematic way, the totals for the IBDP were recorded in the first column and for the TNEP (R) in the second. In other words, data on fourteen observation schedules (two per teacher) was reduced to seven summary sheets with two columns of numbers on each. Then these were

colour coded as explained earlier vis-a-vis the piloting process. Looking at the data thus collated, a summary report was written for each teacher, and compilation of these created the document called 'Teacher by Teacher Analysis'. Because of the length of the reports, and also for ethical considerations (concealing the identities of teachers may not be possible completely for all members of the sample group), an example from only one of the sample group is included following the analysis of the observation schedules and the interviews.

The process of data reduction from the observation data continued by transferring the data on these seven individual summary sheets onto one table. Then colour-coding, which was quite arbitrary, was consistently employed again. Totals were taken and recorded in the last column, and comparisons were made between the IBDP and the Regular groups. These complemented the information from teacher by teacher analysis and the interviews with the teachers, and they were used to get a fuller picture and to understand the similarities and differences. The observation schedule summary table, with results for each teacher, is in Appendix IX.

A summary of findings from the main data collection instrument Observation Schedule complemented by the interview data is provided below.

(a)Teacher Talk

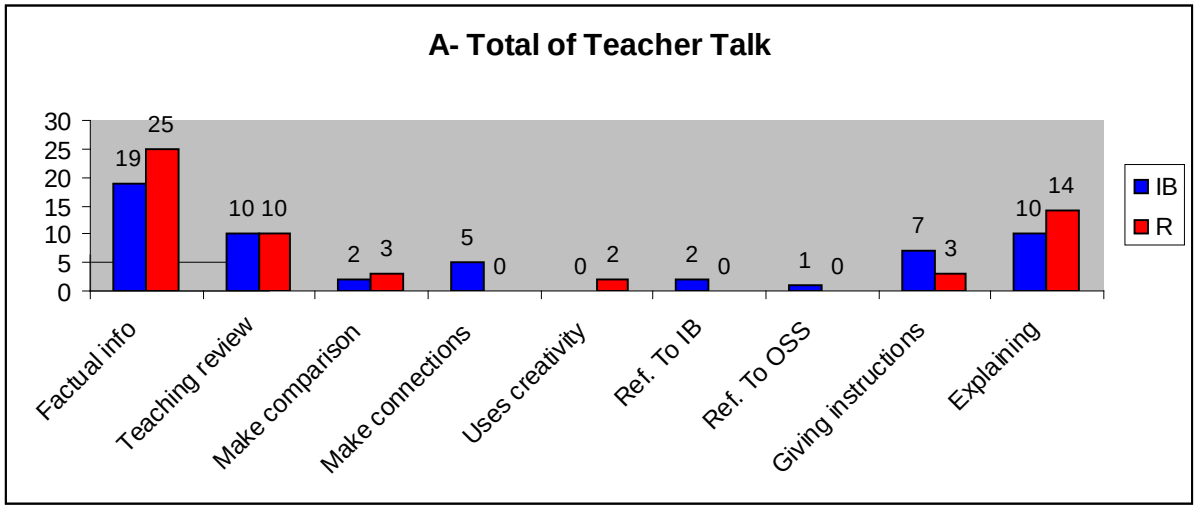

Figure 5: Graph summarizing the results of section (a) of the observation schedule.

Looking at distributions, it seemed difficult to discern during the observation whether there was more Teacher Talk in IBDP or TNEP (Regular) classes, but when all the ticks are added up and colour-coded, it becomes evident that teachers talked more in those IBDP classes observed (IB 314/R 261). This is the only main category that the IBDP group outweighs.

The categories of *Giving factual information* (IB52/R45) and *Review teaching* (IB17/R12) did not exhibit big differences, perhaps pointing to the similarity of the methods for these. *Giving factual information*, *Giving instructions* (IB62/R54), and *Explaining the lesson* (IB132/R123) were the three major types of Teacher-Talk included. 'Explaining', the major type of Teacher Talk, as obvious from the numbers ticked, is about twice as frequent as the next biggest groups- 'giving instructions' and 'giving factual information'- when compared with the other types of Teacher Talk. The difference between the two groups was only nine (132 IB and 123 R), which is quite small when the numbers are that high. It can be concluded that these major types of 'teacher talk' do not seem to be programme related (IBDP or TNEP) for the lessons observed.

For *Giving instructions*, it was interesting that this common aspect of the job was highlighted by the teachers as indicating a difference for the IBDP group. Only one teacher had exactly the same number of ticks in this column; two were close and four of them showed quite a variation. There were comments from the teachers such as, "The IBDP group demands more instructions." The difference in the number of instructions given in both groups in favour of the IBDP group was indicated as a demand coming from the IBDP students by four of the teachers in their debriefing interviews after the observations. My own experience linked to this has shown me that the study habits instilled in the student by the IBDP curriculum may be an explanation for this. As the teachers have repeatedly pointed out, if IBDP plans are laid out in full or in a 'foolproof' way, the students get used to this planned approach and before starting their work, they want the full instructions so that they can also have a plan for their study. This may be part of the IBDP methodology planned. The difference in both sections in their requests from the teachers showing their needs to get on with their work indicate that the teachers are not consistent in demanding the same results from all their students, and thus are not instilling in both groups the same study habits.

Explaining is one of the most characteristic teaching methods employed by all the teachers. The number of tick marks that increased dramatically compared to all other types of Teacher Talk exemplifies this aspect of teaching. The sum indicates a big discrepancy; however, when looked at closely, the differences are not vast for the majority. Only two teachers display big differences. Although the quantity of tick marks is large, the difference in the total between the IBDP and the TNEP groups is just nine. For the teachers, generally the difference in the programme, whether it is IBDP or TNEP is not significant. They go in and explain what they need the students to understand. This indicates a teacher-centred pedagogy.

Making Comparisons and *Connections* were little-used methods on the whole; however, when connections were used, they were observed more in the IBDP groups (30/20). Almost no Comparisons were observed in the mathematics classes, with one exception. The mathematics teacher who used it cited the same example in both sections (IB1/ R2). The rest were in the foreign language classes, and there were three times as many in the IBDP sections (IB18/R6). This reflects IBDP expectations for comparative studies, and perhaps that it is more natural to talk in terms of comparisons and making connections in the language lessons. Maybe, due to the multicultural characteristic of the IBDP programme making comparisons between different cultures, and thinking in terms of linguistic examples that are similar or different from the first language, is incorporated into the lessons as common practice. That was why the observations were made mainly in the language classes. In mathematics and sciences, international connections may be rarer, but there were no real-life connections observed either. Very few such attempts were made, and their total in IBDP and TNEP were the same (IB3/R3). This may be an indication for professional development, that there is room for improvement in the interdisciplinary and integrated characteristics expected by the programmes.

C*reativity* (IB2/R1) was also almost nonexistent. Some teachers mentioned that creativity was already built into the IB programme, and therefore the teacher did not need to make an extra effort to be creative. On the other hand, because the TNEP has not been spelled out in detail, as the IBDP is, the teacher needs to bring in creativity. Teachers of the Regular group complained about the overload of content that needs to be covered. They feel that there is no time left for more creative methods and styles, such as the portfolios used in

IBDP. This was an explanation for more direct styles of teaching, but it was not easy to detect much use of creativity in either of the groups.

There was only one *Reference to IBDP* examinations and none to *ÖSS* (Turkish University Placement Examinations). This would seem to suggest that teaching to the test is not an issue, which is educationally a practice consistent with school policy as required by the Koç School's Strategic Plan:

> "Strategic Objective 4: and actions for meeting this objective
> Develop a convergent curriculum for the entire Lise [high school] that erases the distinctions between IB and the regular curricula as much as possible, so that students are equally prepared for any exam that they are required to sit for entry into university anywhere in the world. This should render superfluous the separate preparation for ÖSS or SAT, so that success in these tests is a natural consequence of our students' mastery of our curriculum."

One of the language teachers said, "Students do not enjoy such reference. They were told it was the same programme for both the IBDP and the TNEP (R)." A mathematics teacher on the other hand, said that there is polarisation between the groups. She said, "They think they are doing very different things, where in fact they are not." This may indicate an issue with the communication of school policies and practices.

These two comments may also be the result of the degree of convergence that different departments have been able to realise at school. A convergent curriculum for the school is a goal set in the Strategic Plan, as seen above. However, mathematics teachers feel the pressure of making sure the students are prepared for the University Placement Examinations, in which mathematics has a lot of weight. Therefore, working on the issue of convergence is very important for them because they have to make sure that they provide all the skills required by both programmes. English teachers are free of that pressure because the school has announced that the IBDP is the school programme, thus freeing them from any curriculum convergence tasks.

(b) Questions

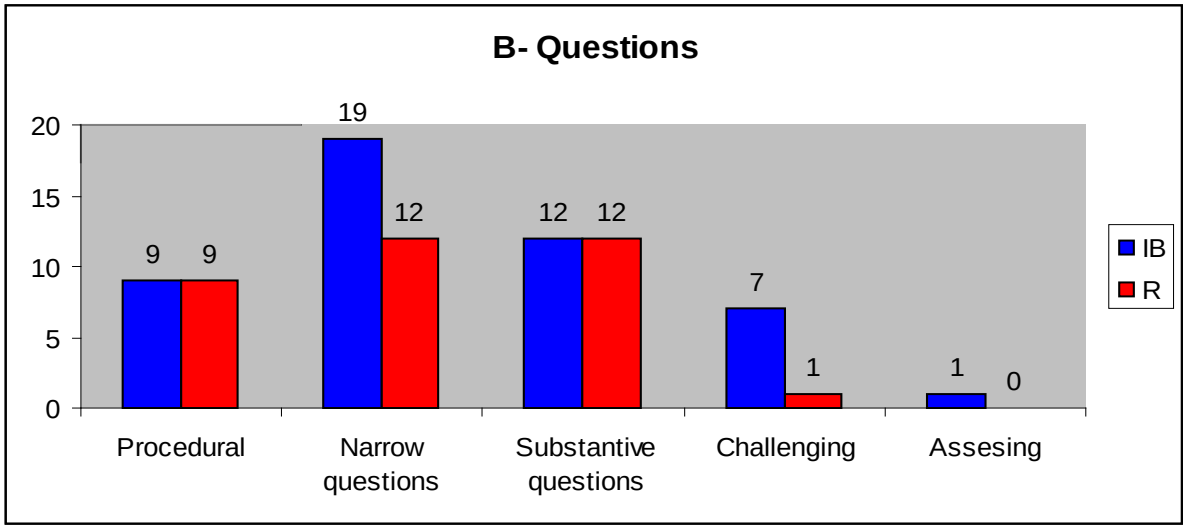

Figure 6: Graph summarizing the results of section (b) of the observation schedule.

Types of questions that were most used were the *narrow/restricted* (IB96/R90) and *substantive* questions (IB69/R95). While there were more narrow questions used in IB, there were more substantive questions in the TNEP. The number of challenging questions, which require creativity, is very close in both groups (52IB/56R). That shows that teachers are more concerned about making sure that the students learn the content in the syllabus than having them use more creative discovery, exploratory techniques. On the other hand, the minimal use of questions labelled as *assessing questions* (IB12/R1) in these lessons observed may be interpreted to mean that this classification was unnecessary as all types of questions are prepared to check student comprehension.

There were more substantive questions in the TNEP group in general (IB69/R95). In mathematics, the anxiety of the teachers to cover the extra content of the TNEP may be an explanation for having more of these questions. However, this does not explain it among the language teachers. It is more likely that the reason is rooted in the simple teacher-centred approaches, and it is a very straightforward way of checking student understanding only second to the narrow/restricted type, because it tends to require rote answers that are not creative.

There were relatively fewer *challenging questions* (IB52/56R) in all, and it may be concluded that challenging questions are a little more used with the IBDP group in the languages, but more in mathematics with the TNEP group. However, the usage of challenging questions when compared with the total number of questions asked (IB264/R268) is approximately one-fifth for both groups. The important point for the purpose of this research is that they are very close in both groups, as is the total number of questions. This may be an indication that the teachers are actually teaching similarly in this respect in both sections.

(c) Questions and Answers (Clarifications)

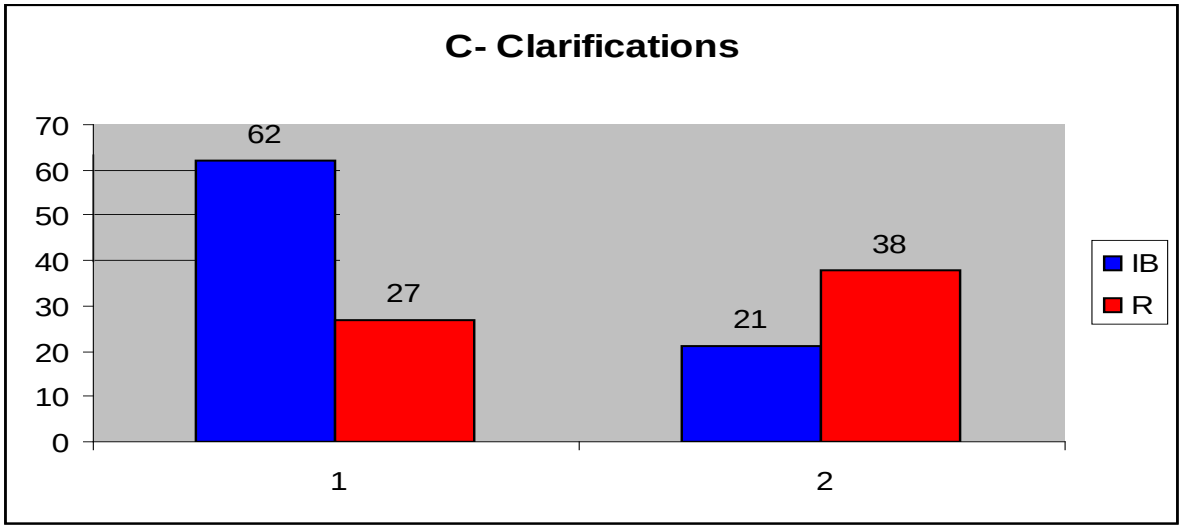

Figure 7: Graph summarizing the results of section (c) of the observation schedule.

The IBDP group has 100 *clarifications or answers* to their questions as a group, while the TNEP group has 115. This is indicative of the fact that the IBDP group asked the teacher more questions and demanded more clarifications. The TNEP group was observed to receive more *individual attention* (IB 134/R 142). This is also conforming to the Teacher perceptions and interviews. TNEP student were described as demanding more explanations from the teacher. They ask more questions, therefore naturally get more clarifications. One teacher described it this way: “The students tell you what they need.” Another teacher had said the IBDP group wanted more individual attention, but the observations do not validate this perception, although the results are close. In her class, she also addressed the TNEP group more individually. In total, the teachers gave clarifying answers to the TNEP group.

During the interviews teachers stated that the group dynamics were very good in the TNEP group, that they were better in doing homework and being prepared than the IBDP group. This may be due to the extra pressure of ÖSS and their attendance to weekend preparatory courses. They may be motivated to solve more questions, while the IBDP group is more relaxed and may be concentrating on other aspects of the lesson.

(d) Teacher Behaviour

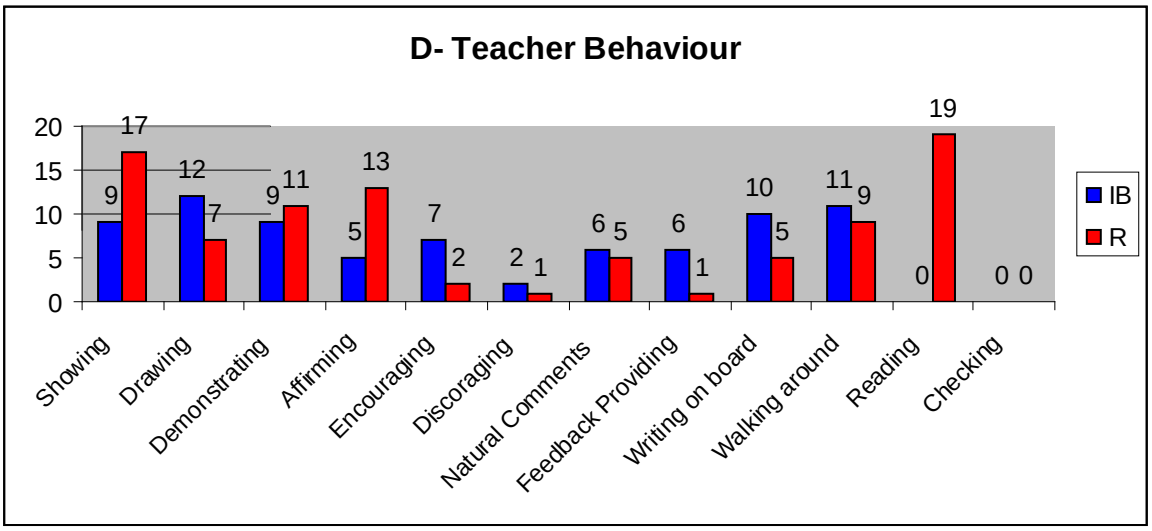

Figure 8: Graph summarizing the results of section (d) of the observation schedule.

Another comparison was made within the departmental groups, comparing the averages for the mathematics teachers and the language teachers according to their observation results in the IBDP and TNEP sections. Then the same colour-coding was applied. What was apparent right away was the consistency of application by the mathematics group. Almost all the categories were colour-coded yellow, which meant that the methods and styles used in the two sections were very close. There were no red areas, which meant that there was no big difference. Of the four areas marked 'same' (green), three were nonexistent (null), which were specific references to IBDP or ÖSS examinations and creativity. The last area marked equal was item 9- *explaining,* with 21 tick marks each. This can be interpreted as precise common planning of the lessons by the mathematics teachers.

In the language teachers' teaching, there was more variation although the majority of the items (18 out of 31) were coloured yellow (close), six were red (different), and seven were

green (same). *Giving information*, *Review*, and *Total number of questions* were equal, indicating consistency in lesson planning. There was no reference to tests in this group either. The big differences were in making comparisons, which was six to one (IB/R), indicating the IBDP methods. In the number of *Questions and Answers (clarifications)*, *Addressing the group*, *Teacher Behaviour*, and *Showing*, the TNEP (R) group had more tick marks indicating a big difference.

The averages for mathematics and languages groups were taken as departmental groups first, then, their sub-groupings, the IBDP and TNEP (R) averages, were taken as shown in Figure 9. After the colour-coding, with the same principles as before, it was immediately noticed that the major differences are in the Teacher Behaviour. Ten out of twelve categories were marked red. The closeness and sameness in the academic areas may be an indication that professional development and team planning could have some effect on the teachers' teaching, but to expect consistency in individual differences of behaviour may not be realistic. Similarly, when the groups are compared according to the subject area, the mathematics group shows a lot more internal consistency in all areas, including the behaviour part. In fact, within the mathematics group, there were no red markings showing a big difference between the IBDP and the TNEP. This is an indication that teachers do use similar styles in both sections.

On the other hand, the excess in the number of questions, and the use of techniques such as comparisons and making connections, was greater in the languages area, which may be accepted as natural because of the subject matter. Oral expression needs to be an important part of the pedagogy in teaching languages.

In general, mathematics teachers were more active in the classes, which may be an indication of a more teacher centred style. Especially 'Addressing the Group and the Individual' and 'Teacher Behaviour' parts showed a lot more teacher activity (see Figures 9 and 10).

Analysis of the Four Main Categories of the Observation Schedule:

(a) Teacher Talk: The general count of tick marks is IB314/R261, indicating that the teachers talk a lot more in the IB sections. This is interesting, because the general perception is that IBDP is more student-centred, and the mark of a teacher-centred class room is known more as lecturing or teacher talk than student talk. The observations about Teacher Talk did not support the perceptions that IBDP is more student-centred.

(b) Questions: IB264/R268. The difference between the two groups is not significant. However, there were slightly more questions in the TNEP section, which may be interpreted as confirming the above category (a), that a teacher makes students speak more by directing more questions to them.

(c) Questions and Answers: IB234/R257. What was observed in this section was not the types of questions and answers, but whether the teacher was addressing the individual or the group. What is noteworthy here is that the outcome is consistent with the previous category. Still, there were more questions to the TNEP group.

(d) Teacher Behaviour: IB578/R609. The presence of the teachers seems more apparent in the TNEP sections, although they did not talk as much as in the IBDP classes. Their body language--actions such as showing, drawing, demonstrating and checking--would be indicators of a more teacher-centred classroom. On the other hand, such teacher behaviours as affirming, feedback providing, and walking around were observed more with the IBDP group, indicating a more student-centred approach.

Comparison of the averaged data of the IBDP and the TNEP mathematics and languages classroom behaviour observed is given in table format in Appendix XI. Below are three graphs of the data comparing the IBDP and the TNEP (Regular group), both together and in their subject area groupings.

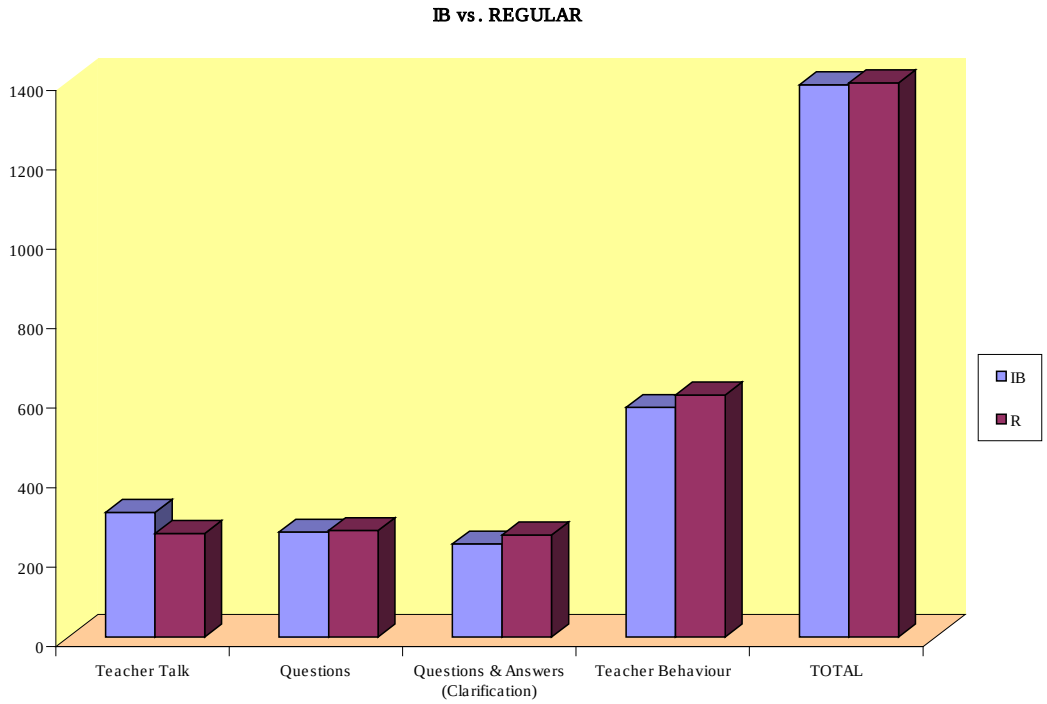

Figure 9: Comparison of the Teachers in IBDP and TNEP (R) Groups

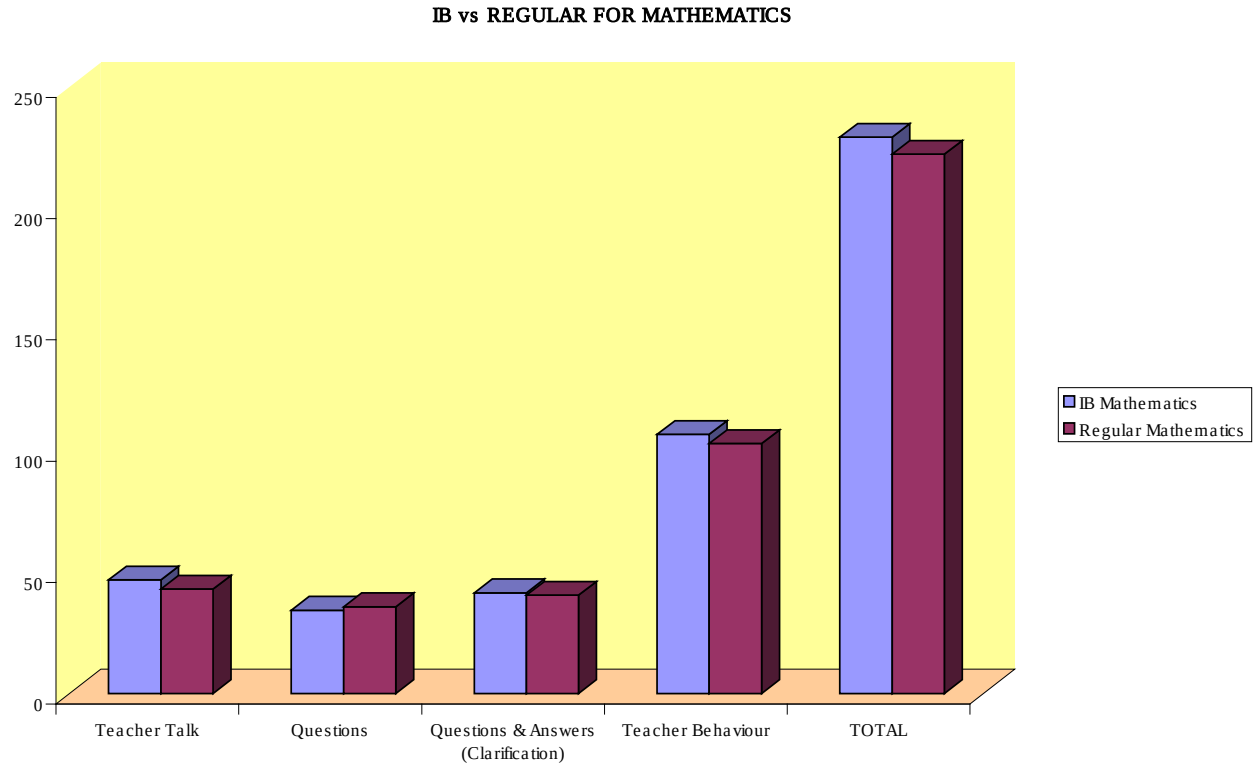

Figure 10: Comparison of the Mathematics Teachers in IBDP and TNEP (R) Groups

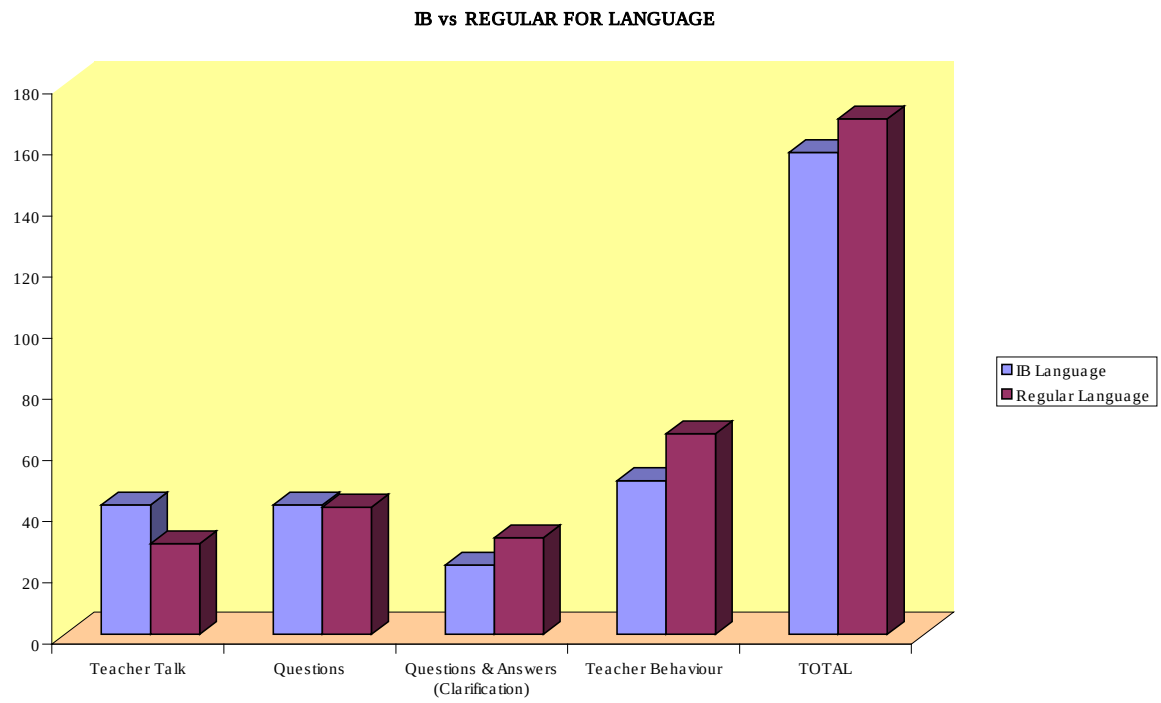

Figure 11: Comparison of the Language Teachers in IBDP and TNEP (R) Groups

Analysis of the general categories in this manner showed that there were more verbal interactions in the IBDP, while the actions and body language seemed more prevalent in the TNEP (R) group. Thus, the two categories do not confirm each other and make it difficult to label one or the other group as more teacher-centred or student-centred. Another analysis was made by grouping the marked characteristics as '*More in IBDP'*, '*More in TNEP'* and '*Equal (close)'*, and then those characteristics consistent in both groups were listed in Figure 11.

More in IBDP	More in TNEP (R)	Close/Equal
Giving Instructions	Substantive Questions	Ref. to IB
Narrow Questions	Challenging Questions	Ref. to ÖSS
Assessing Questions	Showing	
Affirming	Drawing	
Encouraging	Demonstrating	
Feedback Providing	Checking	
Reading		

Table 2: Observed behaviour according to IBDP and TNEP sections

According to the table above both mathematics and languages teachers give more instructions in the IBDP sections. When asked about this observation during the interviews, the teachers confirmed that they did give more instructions. They explained that it as the IBDP students demand the instructions because they pre-plan what they are going to be doing. This implies a certain methodology and skill-building by the teacher modelling and requiring pre-planning from the students. Instead of being told what the next step is going to be, students receive detailed instructions first, understand the task, and then plan for it. On the other hand, the students in the TNEP group may be plunging into solving the problem without wanting to lose time for planning, because in the university preparation courses they attend on weekends, they are trained for speed and not process. In the university entrance examinations, they are asked to answer each problem in approximately one minute: 180 questions in three hours, compared with only a few questions in approximately the same amount of time in the IBDP finals. This is a very important indication of the outcome-oriented versus process-oriented properties of the two programmes respectively.

The teachers consistently used more *narrow* and *assessing questions* in the IBDP sections, while they used more *procedural*, *substantive,* and *challenging questions* in the TNEP sections. This is interesting if we think of the IBDP claimed to have more depth whereas the TNEP is accused of being outcome oriented rather than process because of the ÖSS. However, the fierce competition for the best places in university examinations may be the reason for the students to be more motivated to accept challenges in the TNEP. One of the expatriate mathematics teachers pointed to this fact in the interview, saying that the students in the TNEP sections would tell the teacher their learning needs. In the *Teacher Behaviour* section, in teaching the IBDP, teachers read, affirmed, encouraged, and provided feedback, which may also be indicative of a certain type of student-centred pedagogy. In the TNEP sections, the same teachers were showing, drawing, demonstrating, and checking, which may be indicative of some behaviour problems and not student self-discipline together with more teacher centred behaviour. This may also be indicating a necessary difference in the styles for the management of different groups with programmes exhibiting different characteristics.

Retrospective Interviews

Unlike the self-reflection interviews that were almost like clarification debriefings immediately following the in-class observations, time had elapsed between the observations and the retrospective interviews. The second interviews had become necessary due to difficulties in making comparisons during analysis. In order to overcome some drawbacks in retrospection, such as not remembering what had happened in the classes observed and tending to generalisations, focused interview techniques were heeded. The teachers in the sample group were provided with cues to remind them of their experience in the class observed with the help of the observation schedule marked in their class. Retrospection was encouraged to avoid the three failures discussed in the report of the Bureau of Applied Social Research of Columbia University (Merton, 1990: 21-39) on 'The Focused Interview' which can be summarized as: (a) Reports unlinked to stimulus situation, (b) Superficial reports, and (c) Reaction to interview situation rather than to initial situation. In this enquiry, teachers were encouraged to think back on the class visited. They were assisted in this by revisiting the marked observation schedule, so that they would not give their general opinions but rather base it on what they had experienced during the class on the day of observation. Another reason for emphasising the observation schedules was to make sure that they did not resort to answers or clichés that they thought would be preferred answers.

The observation schedule, which was used as a self-reflection form is included in Appendix X. The teachers filled it on a 1-5 scale as they had on the previous form, placing an 'I' for the IBDP and 'R' for the TNEP in ascending order according to the extent they saw themselves using the techniques in the respective classes. Links with the in-class observation schedule records were traced with the help of the colour-coding system. This gave a fuller picture of the situation and to validate the observation by letting the teachers elaborate on the situation with their own interpretations. In some cases, the teachers tried to give some background about what had happened in the previous lesson or what was going to take place in the next. No other special circumstances that could have affected the lesson were related by the teachers.

Analysis of Retrospective Interview Forms

The next step was to repeat the same process of analysis for the observation schedule that the teachers had filled out showing their perceptions of what had happened in their classes. The results of these were also transferred onto the next two columns on the chart, where now there were four columns, two showing IBDP and two TNEP class results for the four main clusters: (a) *Teacher Talk*, (b) *Questions*, (c) *Questions and Answers* (*Clarifications*), and (d) *Teacher Behaviour*, with sub-items under each.

After individual summary sheets were created, calculated, and colour-coded, a general summary sheet was created for all the teachers observed. The totals for each teacher were transcribed and colour-coded to obtain an overall picture of the results. The colour-coding facilitated distinguishing what methods, what kinds of questioning techniques or teacher behaviour were more prevalent in which kind of programmes, national or international, or whether it was more of a universal exercise of pedagogy.

Teacher by Teacher Analysis

Based on Yin (1989: 132-42), Robson (2002: 513) describes the Comparative Structure Case Study as: "Here the same case is examined two or more times sequentially, each time in terms of a different explanatory or descriptive framework. The purpose is to demonstrate or to give the reader sufficient information to judge which of the explanations or descriptions best fits the data."

To get a fuller picture of the question before drawing conclusions, there is a need to look at the issue from different perspectives, and it is only fair to obtain the views of the people directly involved. Therefore, after the class observations were completed, teachers were given the self-reflection forms to fill in. These consisted of data that could complement the observations with information not restricted to the student-teacher exchanges and relationships that take place in the class that informed the observations. In addition to data similar to the observation schedules such as creativity and life connections, their opinions were solicited regarding the influence and involvement of other stakeholders, such as parents and colleagues, and factors that influence their performance in teaching the two different programmes. For example, what sort of pressures affect their social environment, such as their collaboration with their colleagues, relationships with students, the pressures of having two programmes and the university placement or examination stress on the

students, teachers, and administration were different items on which they were invited to reflect by the self-reflection forms.

During the interviews, they were shown the observation schedules filled during both of their classes observed. Their opinions were asked. Then, the discussion was expanded taking their self-reflection forms as the basis of our interview. As a result, many different aspects of the teaching going on in different programmes were considered and a better understanding was reached. An example of a summary analysis of these different forms of data for one teacher from the sample group is in Appendix XIII. Analyses for all could not be included because of the length restrictions of this study and because of the difficulty of keeping the identities anonymous. However, the insights gained from the examination of the entire sample group are reflected in the study.

CONCLUSION

As a result of studying all the data gathered in order to understand the relationship between teaching approaches and styles characteristic of the confluence of the two programmes, the national (TNEP) and the international (IBDP), within the Koç School context, some themes seemed to be recurring. The main themes that appeared to explain the repetitive occurrences and account for the way the programmes affect the teaching were: time, bias, and complexity. Many of the categories that we observed, and the issues that were discussed in relation to these categories, seemed to be influenced by these three themes. In Chapter Six, there will be further discussion of these outcomes from the analysis of the data gathered by the observations and interviews in this chapter in relation to the research aim, which is an exploration of the relationship between teaching styles and the creation of a convergent curriculum merging the TNEP and the BDP within the Koç School.

CHAPTER SIX: DISCUSSION AND CONCLUSION

This chapter discusses conclusions drawn concerning the relationship between teaching styles and the creation of a convergent curriculum merging the International Baccalaureate Diploma (IBDP) and Turkish National Education (TNEP) at the Koç School, which is the aim of this Research Inquiry. The conclusions derive from analysis of results from extensive observations and interviews based on the three research questions. It is sometimes difficult to limit the discussion to one Research Question at a time because they seem to be intertwined, touching each other from different points in many cases in a cause-and-effect relationship. The questions are not totally separate, as is the case with many real-life issues; they are sometimes different aspects of the same issue. Answers to the following questions were sought by the research:

1. Are the teaching approaches used by those engaging both the IBDP and TNEP different in the different programmes?
2. Is the creation of a convergent curriculum from a synthesis of the national and international curricula by merging the IBDP and the TNEP feasible?
3. What are the implications for the professional development of teachers arising from the implementation of a convergent curriculum?

Research Question 1: Programme-specific approaches and styles used by teachers

In relation to Research Question 1, the analysis of the IBDP and TNEP observation data shows that within the same subject group teaching styles and approaches do not vary much. For example, the difference between mathematics IBDP and mathematics TNEP sections was minimal. The whole chart was colour-coded yellow, which meant the differences observed were fewer than five. The differences that were apparent seemed to be due to the nature of the specific subjects of mathematics and languages, but not due to the differences between the IBDP and the TNEP. The mathematics classes seemed to be more teacher-centred in IBDP and the language classes more so in TNEP sub-groups because the teachers talked more and were more active in these sections.

During the interviews, some of the teachers spoke about the differences in the nature of the students in the different groups. They did not say that the nature of the programme caused the differences, but they were of the opinion that external factors (such as university choice) influenced them. It was also observed that these teachers had some bias towards the students and the programme, and this bias appeared to affect their treatment of the students. The technical aspects of the teachers' teaching did not exhibit much difference; for example, their plans and the methods used did not change, but their personal styles were the area where most of the differences were observed.

Teachers in general complained about lack of time and content overload due to the convergent curriculum, but none spoke about it being unfeasible. On the contrary, they said they were doing the same things and using the same style in the lessons. One of them said that although the students had a false opinion that different things were done in the different sections, the fact was that they were actually doing the same things. This was supported by the observations. In almost all subjects, the major influence of the IBDP on the TNEP and the school programme was the use of technology. The teachers attending IB workshops learned about newer approaches using technology and were instrumental in introducing them into their departments. There was no question about using the same technology school-wide. Even in recruitment interviews for Koç School teachers, efficiency in the use of technology by the candidate becomes a positive reason for employment. On the other hand, the extra content required by the TNEP and the rote memory skills makes the Koç programme more holistic and encompassing both "quality and quantity".

Research Question 2: Feasibility of convergence of the two programmes

In response to Research Question 2, the observations indicated no sign of anything that would make the converging of the two programmes unfeasible. A good example of the national/international programme synthesis was given in Chapter Two in describing the School-Based Syllabus (SBS) Turkish Social Studies (TSS) course, where the Turkish content is integrated using IB methodology. Caine and Caine (1991: 127) claim that in brain-based teaching, "Integration of the curriculum is an excellent way to increase richness and contribute to meaningfulness." The feedback from both students and teachers who experienced the teaching and learning with this programme supports the validity of this claim.

A common characteristic of both programmes, the TNEP and the IBDP is that they both aim for (and have taken on the responsibility for) the control of an education of high standards--the former at the national level and the latter at the international level—and for providing professional development to teachers. Therefore, both are centralising agents for education, teaching the values and skills voiced in their mission statements and the IB Learner Profile (see Appendix XII) and aim for a high standard of education.

The TNEP was designed to respond to mass education needs to provide equity and stability, therefore, lacks a dynamic atmosphere and is slow in responding to the cutting-edge requirements of our times, which can not meet the high expectations of the Koç School. Suna Kıraç, one of the founders of the Koç School, had urged the students at the school's opening ceremony not to accept being mediocre. The convergent curriculum idea may be considered risky by some, but it certainly is dynamic and at the cutting edge in conformity with the vision of our founders. As Caine and Caine (1991: 152) describe, "maintaining a sufficiently orderly atmosphere is vital if we wish to foster the conditions under which challenge and security can exist simultaneously. This becomes the concern and responsibility of the entire school community". By introducing the IBDP as an add-on programme within the safe traditional environment offering the TNEP, a dynamic new and unique entity emerged as the Koç School Programme. In time, working with both programmes, teachers have developed their own approaches to answer the needs of their students (see Appendix IX Observation Schedule Summary).

To understand the implications of the confluence of the two programs on the professional development for the Koç School programme, we need to comprehend the scope of influence of each one these programs on the other. Although there is work going on to continue the educational reforms of the TNEP elementary programme in the high school, it seems that the traditional framework of the old French system that was adopted in the early twentieth century, with its compartmentalised, subject-based approach, seems to be locked in. In the case of a radical change to the present system, what to do with the teachers who have been trained and appointed in the old system are an economic, and therefore a political problem. On the other hand, training of teachers for the new programmes will also require a transition period. Timing and economic resource allocation questions do not have simple answers. It needs long term planning, and consistent and courageous leadership to

take such decisions. As educational investments are made for the long term, politicians with educational far-sight and wisdom and decisiveness are necessary to make those changes.

Research Question 3: Professional Development

As a result of the teachers' increasing familiarity with both programmes, and knowledge of their students' needs in the specific context of Turkey and the Koç School, the teachers proceeded creating the Koç School convergent curriculum as a hybrid programme. It will be an on-going effort to maintain the somewhat delicate balance in this innovative programme. Such dramatic restructuring could not have occurred without addressing the issue of professional development for teachers. For a start, the IB organization requires schools to go through a preparation phase of up to two years before implementation. Much of this preparation is in the form of teacher training. For example, at the Koç School, all of the administrators and department heads attended information sessions about the IBDP given by authorized IB workshop leaders. Some teachers who were going to teach the IBDP were sent to official IBDP workshops abroad, and workshop leaders from the IBDP were invited to train the relevant departments at school. Such intensive professional development has become a pattern for the school and has affected the whole curriculum and the school culture in time.

One of the strongest aspects of the IB has been its professional development opportunities and teacher materials, described by a mathematics teacher in the sample group as the IB lesson plans are foolproof. Especially for novice teachers, this is a big advantage. It is also the result of the centralisation of the programme. Another central-control mechanism is the IBDP examination system. Assessment automatically shapes the teaching and the planning for teaching. In the TNEP, although teachers are asked to make yearly plans, they are not provided with a detailed plan. Therefore, teachers need to put more work into planning and employ more creativity. This was also noted by the mathematics teacher who had indicated on her initial self-reflection form that there was more creativity in the TNEP, because teachers had to come up with their own plans, whereas in the IBDP the plans were ready. The IB workshops help all teachers to use the same language and methods to ensure global standardization. Because the Turkish system has no such teacher training, the teachers who attend IBDP workshops develop mainly under the IBDP influence, and this has probably helped consistency of teaching methods, as appears to be evident from the observations.

Values Education

The IB Learner Profile (See Appendix XII) summarizes the traits the programme aims to develop in students: inquirers, knowledgeable, thinkers, and communicators, risk-takers, principled, caring, open-minded, well-balanced and reflective. In the TNEP there is no single document like the IB Learner Profile, but throughout their documents and in the Goals of National Education (GNE) statement even if the terminology is not identical, similar ideas and values are expressed. For example, the GNE's "feel responsibility toward society… and contribute to the happiness of society" is expressed as "help to create a better and more peaceful world" in the IBDP mission statement (see Appendix I for the IBDP, TNEP and the Koc School mission and goals statements). The "ability to think freely and scientifically" in the TNEP can be compared to "inquiring and knowledgeable" in the IBDP. In the Koc School mission statement, (see Appendix I), these are summarised as "intellectual and human qualities" and "ethical and responsible citizens of Turkey and the world community", bringing together the national and the international.

In the IBDP, there is no document to help teachers deal with issues of teaching the traits listed in the learner profile. The same learner profile applies to both, because teachers are also considered to be learners. In any educational institution, when the general goal or mission is highlighted, values are given central importance, yet the subject does not come up in professional development. Teachers are expected to be role models, but even if they possess all of the appropriate values, how do they transmit them? If the school wants to adopt explicit values education, teachers need support by way of professional training, as they did at the Koç School, when values education during homeroom hours was initiated. For elementary school teachers, it was not a big issue because programmes for young learners generally include values and behaviour education, and those teachers have the skills to do that. However, secondary school teachers were panic-stricken, as their formal training was only "catering for the instrumental, technician-focused dimension of a teacher's responsibility" (Hayden, 2002: 122) and they requested professional development for teaching values to teenagers. In the midst of numerous offerings of professional development opportunities for the 'technician-focused dimension', it was not easy to locate one for the teaching of values. In the end, a UNICEF trainer gave the values training.

Like the Koç School, many IBDP schools do not yet have the PYP and MYP components. Therefore, their students may not have come to the IBDP with the IB learner profile already instilled in them. Although Ralph Waldo Emerson's adage, "What you do speaks so loudly that no one can hear what you are saying" (in Eisner, 1998), speaks volumes about role modelling; teachers need explicit guidance in developing the IB learner profile traits in youngsters aged sixteen to nineteen. The recent *Academic Honesty* document (IBO, 2007), defining and spelling out the process and procedures is an indication that IBDP has recognized this need. Also, the service component of the CAS implicitly provides some values education.

As well as not defining a specific profile for IB teachers who are the ones to help learners develop the above traits, IB has never required or even suggested the use of specific pedagogies. They were implicit in the curriculum design and could also be inferred from the assessment requirements. The forthcoming IB documents are important in this respect because it indicates that IB is now going to be more explicit about pedagogy. Debates on pedagogy based on such documentation may further clarify the theory guiding the practice of the teachers. It will also increase standardisation of the methods of implementation of the programme worldwide. This in turn may yield better results in outcomes as well as make moderation easier and assessment more consistent. However, it will also mean more central control, which can lead to less flexibility for individual differences in teaching, possibly hampering innovation and creativity. A major criticism of the TNEP has always been its centralized control, which cannot accommodate unique differences among schools. Now, the IBDP, because of its fast growth, may be in danger of losing its flexibility in dealing with unique requests from schools. They may become overstretched for providing expert personnel such as workshop leaders or examiners, and the quality of service could suffer.

Constructivist Pedagogy

Application of constructivism is overt in the PYP and the Middle Years programme (MYP), but with the subject-field system and restrictions imposed by the IBDP examinations regarded as the proof of high standards by leading universities, and IB's very precise plans, the flexibility necessary for the constructivist approach may be more difficult to effect in the IBDP than the other IB programs for younger age groups. This has also been the case with the educational reforms in Turkey. A new Turkish primary programme

based on constructivism has been put in practice, but not without pains in the professional training aspect. Many teachers who were rigidly set in their methods were fearful and reluctant to make the necessary adaptations. In the Turkish secondary curriculum, although there is considerable similarity to the IBDP syllabi in some newly developed programmes, a truly constructivist approach is very difficult, given the constraints of ÖSS and SAT and TOEFL examinations.

On the national scene, although the Turkish Ministry of National Education may appear to be the authority that prevents free application of the IBDP in schools, in fact it is the Higher Council of Universities (YÖK), which is the authority overseeing the university examinations (ÖSS) and deciding on the equivalence of degrees for acceptance to higher education. Even if the TNE Ministry granted all the permissions necessary for the IBDP at the high school level, the content of the university examinations is the real driver of the programme, and the situation is similar to IBDP being restricted by university recognition of the programme. Greenberg (1983), writing about this issue, pointed out another important facet of the effect of the competitive testing: “At times, it seems that measurability has become more important than substance, and that results of such normative tests have replaced values as the prime determinants of curriculum”.

Although it enhances the credibility of the IBDP worldwide, this recognition by the universities also imposes restrictions on the IBDP’s flexibility vis-à-vis new developments and educational needs that emerge with changing times and conditions. However, the positive aspect is the stability it gives to the programme in the fast-changing world of teen-agers. Its predictability also facilitates long- term planning for professional development for IBDP teachers.

University Partnerships -- A New Phase in Professional Development

More than half a century has passed since the inception of the then ‘innovative’ IB educational systems. As well as developing the IBDP, IB provided teacher workshops led by IB-trained teachers. Then the research unit at the University of Bath started a relationship with the academia. Now, a new phase has started: development of a relationship between the IB and the universities. This will formalize the nature of professional development in response to the needs of the growing IB institution. It will be

interesting to compare the effectiveness of these programmes run by the universities with the workshops organized, and run by practising teachers. The IB workshops have been popular because teachers considered them 'down to earth', and accessible. On the other hand, with the contributions of the research unit at the University of Bath and the new university partnerships, natural cross-fertilization is occurring between national and international curricula, especially in national schools where IB programmes are offered. For example, the convergent curriculum at the Koç School has been an enriching educational experience that inspired the development of the School- Based Syllabus in Turkish Social Sciences. The positive feedback received from the application of comparative methods of the IBDP, combined with the TNEP content, inspired teachers to create other interdisciplinary and integrated programmes at the school.

The IB had started out as an educational innovation converging educational philosophies and practices from different nations. That kind of spirit motivates schools and teachers who are implementing the programmes to take ownership by contributing to improvements in harmony with their local needs as well as the needs of the fast-changing world. The difficulty is in maintaining the balance between the organic and dynamic changes spurred by positive feedback and the stability needed to preserve the harmony and credibility of accepted standards. This is a complex task, but it generates incredible learning opportunities.

The IB's new university partnership pilot-project involves three universities, University of Bath in England, University of Melbourne in Australia, and George Mason University in the United States. Called "The IB teacher award scheme" (IB, 2007), it was announced on the IB website: "This professional development initiative currently being developed and piloted" on two levels aims to "recognize practical understanding of curriculum, pedagogical and assessment issues related to the implementation of the IB programme." The description of the nature of the programme is currently unsatisfactory, because it does not promise anything different from what has already been provided by IB workshops. It focuses solely on 'the teacher as the technician' and there is no mention of a major component of the educational profession, which has a 'make or break' effect on the students, the relationship between the student and the teacher, the personal touch that motivates, encourages or discourages, and moves the student away from the learning activity. If the universities are undertaking the professional development dimension,

instead of repeating what is already available in a more formal and maybe therefore less accessible manner to the practising teacher, they need to answer Hayden's question:

> "The balance to be found in any individual between the roles of 'teacher as a technician' and 'teacher as a role model' may vary according to their particular responsibility, the cultural context, their personality and the characteristics of the students being taught. How, then, does this dual role relate to the discussion of professional development?" (Hayden, 2002:115)

Hayden answers her own question issuing an overt challenge to the universities. If they are going to contribute anything new, the expectation is explicit:

> "The answer to this question lies in a consideration of how professional development is, or should be, used to support both aspects of a teacher's professional life: professional development for the teacher as a technician, and professional development for the teacher as a role model. The question could be asked in any context, national and international." (Hayden, 2002: 115)

Such an approach would be greatly appreciated in the Koç School's professional development scheme. Until now, the trainings offered by the IB have been very helpful in providing expert support in the subject areas. In the Koç School, as we work to achieve harmony in curriculum and school culture, a professional development scheme that is a synthesis of the national and the international, along with values, would be preferable. There will be a valid justification for the allocation of professional development funds for such programmes because, as Day (1999 in Hayden, 2002: 144) puts it: "Successful teaching will always demand both intrapersonal and interpersonal skills, and personal and professional commitment. It is a synthesis of the head and the heart." He states: "Teachers …stand at the interface of the transmission of knowledge, skills and values," which to me is a metaphor reflecting the status of the teacher as a whole person.

EMERGING THEMES

During interviews, teachers were able to explain their thoughts and give reasons for the outcomes from the quantitative data from the observation schedule. Several subthemes were repeated, but two main themes that emerged as affecting the pedagogy were: a) time constraints and complexity created by the need to fulfil the requirements of both the TNEP and the IBDP (the others were overload-related) and b) bias. Other subthemes emerged, less often and were not singled out as causes or reasons affecting pedagogy. From the analysis of the observation schedule results, the teacher self-reflection forms, and the notes taken during the interviews, it becomes clear that differences related to the two programmes are partly due to bias, time pressure and overload, and complexity.

Bias

Apparently some Koç School teachers—perhaps as a result of habit, professional comfort zone, and culture-- may believe that one of the programmes is superior to the other or that the students doing the programme they favour are superior to the others. This affects their attitudes towards the students and their performance and quality of teaching, giving way to a chicken-and-egg scenario. Teachers may have varying affinities to the programme or to the students because they think they understand and feel closer to one or the other. In attempting to synthesise the programmes, we need to try to be fair and equal in our approaches to both. In the booklet entitled *Diploma Assessment Principles and Practice* the issue of bias is discussed at length, but it is a complex issue:

> "It is widely recognized that lack of fairness in the assessment process is only one factor contributing to inequality in education, and possibly one of the less significant ones. Differential performance by different sub-groups on a test may be the result of factors quite unrelated to the test itself. There are many other sources of inequity in education that have a major impact on the student achievement, for example, differences in quality of teaching within a school, differences in level of resourcing …." (IBO, 2004: 9-11).

Total fairness and equity may be very difficult to achieve. Bias may not seem as important as some other factors, but the 'make or break' effect of teachers' attitude must be borne in mind. For example, as observed in this research enquiry, a mathematics teacher might think that TNEP students are overloaded because they attend weekend courses and s/he is therefore more tolerant and less challenging towards them. A language teacher who might think IBDP students are better and more interested in language is more tolerant in the IBDP class, lending books to students without books, while she does not show this tolerance in the TNEP class, where she thinks the students are more shallow. When these situations were looked at logically, the actions had to be reversed in both cases -- to challenge or to help the students as necessary. If we can make the teachers aware of the biases they may be holding in their attitudes towards the different programmes and the pupils taking them, the teachers can be helped professionally, thus assisting the school programme and the students in return. Total convergence may help to resolve the distinction in their minds.

Such 'awareness training' could be done during orientation, which was designed as a year-long programme for the induction of new teachers to the school. Nonetheless, it should also be a part of the general professional development programmes because all teachers, and particularly the more seasoned ones set in their ways, can benefit from understanding the effects of the biases they hold.

Time

One of the recurrent themes mentioned by teachers as a main reason for insufficiencies in the teaching and learning activities at the Koç School was time. The basic claim of Bloom's Theory of 'mastery learning' is that 90 to 95 percent of students can learn basic principles and skills if they are given enough time. At the Koç School, many of the students are from such a privileged class, and it is quite common for students to have tutors if their grades are low, they are having difficulties learning in class, or they are preparing for university examinations. There are also systems at school for teachers to support students with remedial work after school. There is a CAS activity for peer tutoring, and a sisterhood and brotherhood in the dormitories provides extra support, especially to the new and younger students, who do not have means or families nearby.

Overload

The Koç School administration is always under pressure to manage the time allocations in order to satisfy the parties asking for various school activities (which are necessary for active learning) and the teachers, who are adamant about not giving up class time or excusing students from their classes. Philip W. Jackson, who had the responsibility of running the University of Chicago Laboratory School said, "criticism by academics of schools is easy when one has no responsibility for day–to-day operations of a classroom or school." (Eisner, 2001, in Palmer 2002: 202).

Naturally, trying to merge two programmes in a single school is also seen as a reason for overload complaints. It is seen by teachers as a problem unique to the Koç School because of the convergent curriculum. However, what researchers such as Stoll et al. (2003), Hargreaves and Fink (2000), and Block et al. (2000) have written shows that this in fact is not a problem unique to one school. Rather, it is a common problem, even in schools with only one programme to follow. Stoll (2003: 186) has itemized reasons for teachers' needing time to do a good job professionally: planning; learning new techniques and processing what is learned from professional training to integrate them to their teaching; observing peer's work and researching their own work; reviewing data; reflecting, examining and clarifying ideas; and working collectively and creatively with the school community to provide the richest possible learning experiences for their students. This can have implications for professional training in time management, planning, and organization for efficient and effective planning for both teachers and students. Many administrators would agree that while the staff complains about insufficient or lost time, the general observations at school indicate that a lot of time is spent unwisely. It is a natural tendency to plan more meticulously when there is limited time allocation to courses, than when there is plenty of it. Professional development in new teaching strategies and collaborative learning techniques can lead to improvement in teachers' use of time.

Stoll et al. (2003: 41) also notes, "Time has become a precious resource. Educators everywhere are grappling with decisions about how to schedule it, how to use it, how to preserve it and so on." This is a description that also fits the Koç School. Especially because it is a commuter school located on the outskirts of a metropolis (Istanbul) with a major traffic problem, late arrival at home both by teachers and students is a constant reason to ask for early dismissal, fewer class hours, less time spent on after-school

activities, and so on. Great pressure is put on the administration to try to create a balanced schedule that can satisfy all curricular and extracurricular needs.

Time Saving as a Result of Convergence

The Turkish Social Sciences (TSS) School-Based Syllabus is a good example of how converging the curriculum creatively has helped save time in the weekly programme. By creating an interdisciplinary School-Based Syllabus from the Turkish Social Sciences courses, we saved not only time, but also reduced the number of courses students had to take. Three separate required courses (history, geography and sociology) were reduced to one, saving also on assessment time.

This major effort has brought a lot of satisfaction both to those who developed and teach it as well as to the students who study it. The most important contribution of this IBDP course was its transformational effect on the whole department. A department that had been left out of the IBDP dove headlong into the heart of it, undergoing a speedy metamorphosis. They started asking for training and resources, improved their technological skills, and asked for expert help from a university professor whom the school provided for them weekly. It was the beginning of university collaboration at the Koç School.

IB does not easily approve a school-based syllabus, because the schools then have control over the programme, and one programme sets a precedent for the others. Both the creation and the control of developments that are out of the norm may be difficult. However, the advantages to student and teacher learning and development outweigh all the disadvantages; therefore, it is worth undertaking such creative, out-of- the-box initiatives. It is also a good example of the use of constructivism in designing a course in a spirit of cooperative teamwork. It requires the kind of actions identified as the underpinning of successful school improvement efforts by Stoll and Fink (1996): “existence of shared goals, pursuit of a common vision and a shared sense of direction,” which had to be there for them to pursue and conclude such a complex and creative syllabus design. Their shared determination made teachers of three different subjects work in “collegiality, mutual assistance, joint work and sharing-- the sense of ‘we’re all working on it together” (Halsall,1998: 30). From the efforts of creating a convergent curriculum, bringing together the TNEP content with IBDP characteristics, and constructivist methods based on

understanding and comparison, emerged a very co-operative and collegial culture with " belief in the notion that improvement is always possible, that it is a process and an always shifting end; and a belief that teachers are learners and that maximization of student learning is dependent on this" (Halsall, 1998: 30). The teachers learned a lot during this process. Their self-confidence increased and they were able to challenge their students in much more enjoyable ways in which they could all engage higher-order thinking faculties and facilitate a lot more in-depth learning.

In regard to Research Question 2, the successful example above involved only one course, but it was a very problematic one. In bringing together TNEP content and IB methods, it also addressed the Research Question 2 about feasibility of the synthesis positively. The difficulty, in doing this is not merely technical, in designing the syllabus; procuring approvals and permissions is bureaucratic and political, and the full support of the administration is necessary. Thus, not only the teachers but also the IB coordinator and the administration have to work very closely and supportively.

Since it was possible to merge the social sciences, would merging mathematics and geometry be easier or more difficult? In order to gain time in the weekly schedule, we have decided to have the same teacher handle both courses in a holistic manner, as one course. Generally, the international teachers do not have experience in teaching geometry in depth. When they arrive at the school their Turkish colleagues give them an in-depth review as well as materials produced in the department. This is an example for Research Question 3 about professional development implications.

The contribution of the international teachers to local teachers at the school is usually in introducing student-centred activities that enhance constructivist teaching. This also would seem to address the question of whether the synthesis of the local and the global enhances the practice and teaching styles of teachers (Research Question 1). It does enhance their pedagogical skills, knowledge, and style, but even more so if they are committed to the idea that it is possible, and if the teachers put time into developing the convergent curriculum.

Time Needed for Assessment

Another issue that is subject to constant debate among the teachers is the time required for assessment. According to TNEP regulations, courses that have three hours or more must have a minimum of three examinations per term; for those with fewer hours than three, two examinations. At least one of these examinations needs to be common. Because students take on average twelve different subjects weekly, the time spent on assessment, especially during common examination times are a matter of heated debate among teachers. Alternative assessment is quite new to the TNEP context. Portfolios, take-home papers, and projects have been new models of alternative assessment introduced to the school culture by the IBDP. These could help save teaching time by decreasing testing time, but they are not yet accepted by the culture at large because teachers worry too much about academic honesty issues, hence the debates.

Extra-curricular Activities

It is not only in the curricular areas of the school that the synthesis of the local and the global has positive effects. The extracurricular (or the 'interstitial learning') areas described by Thompson earlier that encompasses the whole school programme has an impact on the school culture. This influence enhances the social atmosphere of the school. Merging of the CAS (Creativity-Action-Service) component of the IBDP with the activities required in the TNEP took place quite spontaneously at the Koç School. The contribution of CAS in this case was the well-balanced structure, the reflective student-centred character that the TNEP activities the teachers had to learn as passive supervisors, leaving leadership to students. Thus, the realisation of the school mission to bring up leaders is furthered. This is also a reflection of the IB-style student-centeredness and an example of giving leadership responsibility to students to become risk-taking, self-assured citizens.

COMPLEXITY OF THE KOÇ SCHOOL

The Koç School is a big system, as described in Chapter Two, with 2000 students and a mix of 400 national and expatriate teachers and support staff, plus parents and other stakeholders in the community. The circus disk-spinner metaphor used by Hayden (2007: 113) is a good description of the multitasking required of a top administrator in such a school -- trying to keep everything running without disturbing or distorting or delaying

events running concurrently. The curriculum is also complex, merging the national and the international (the IBDP), and the mission statement is very ambitious.

Stoll et al. (2003: 40) say, “Unlike changes in previous generations, … those in the twenty-first century will continue at an ever-accelerating pace that necessitates more sophisticated learning, if for no other reason than to ensure human survival and adaptation.” Fink (in Stoll et al., 2003) reports a teacher asking a parent whether s/he wants her to prepare her child for her past or future. This shows one of the difficulties faced by schools in trying to prepare students for the information age when their parents yearn for schools like their own -- ‘the real school’ for them. It is even more complex in a school such as the Koç School, which caters to a body of national students, and a faculty made up of more than ten nationalities, with a programme that is ambitious in setting high standards for success both at home and abroad. Some parents are not sure about the programme merger presented to them, although they like the internationalist and humanistic goals of the school. However, they are also anxious to know whether this will serve their short-term goals of a place for their offspring in a competitive university in Turkey or abroad (possibly with some scholarship).

How can these be balanced and meet the goals of everyone (be all things to everyone)? Is this realistic? Some may think not, because these are competing goals, but it is the reality of life. Fortunately, both groups are satisfied to a great extent because the school statistics indicate that 80 percent of the students are placed at a university on their ‘top five’ list. In fact, that is only part of what takes place, because university entrance is only part of the end goal. In addition, the student acquire many other skills that will help them in life, such as good multilingual skills, many academic skills that will serve them at tertiary education and beyond, self-confidence to earn their place in society, an understanding of social problems, and skills to contribute to the society at large while playing their part in it.

All this sounds chaotic, and it is complex. While success with one programme is already challenging and highly competitive, we target success while fulfilling the requirements of two programmes. It is clear that both teachers and students have extra load. The standards and expectations are very high, and we have to operate in some kind of a flux because nothing is completely stable. Student groups change, teachers change, some curricula and syllabi change and rules of passing and promotion and even university placement

conditions change. Nothing is exactly the same for making precise long-term plans and predictions. Holland (1992, in Waldrop: 254-262) mentions that in a game of chess players have only fragmentary information and have to make moves on logical, deductive reasoning. Therefore, they can plan for only a few steps ahead. Largely they need to operate on an inductive basis, making decisions as they go along, by drawing from past experience, by using heuristic rules of thumb. He explains that one learns in such an ill-defined environment because one has to do so. Students have to get by and survive at school, sometimes taking two programmes to keep open all of their options, and they have to do well on the University Placement Examinations. They adapt to all the hardships, survive them, and get their reward, which is their university acceptance. While going through this process, their adaptability increases by pushing their limits; they learn a lot of organisational and survival skills as well as knowledge which helps them in higher education and their subsequent lives.

Teachers have to keep on tiptoe because their performance has to match these tough conditions in being able to have students do well under such challenge. Administration has to be ready to accommodate all the constant changes an pressures and take necessary measures. There is no place for complacency in such a dynamic environment. That brings success in spite of the opinion of those who say you cannot be everything to everyone. The university placement results will be evidence for this (See Appendix XV).

Merging of the National and the International

Walker (2006) points to the fact that at the beginning of the twenty-first century, the social environment of education is changing in response to accelerating globalisation. For example, in Turkey, there is an increase in the number of educational institutions, such as those sponsored by philanthropic foundations, and an increasing number of private schools. Many of these schools are also working with the International Baccalaureate (IB) organization while working with the Ministry of National Education in response to increasing international relationships and global developments. Walker (2006) explains that in our time the national and international education are beginning to merge and it is now a responsibility of national governments to include the international perspective in the national programs. This merging is what the Koç School is trying to achieve in response to the requirements of our time.

Overlooking the need to expose our students to international education and to equip them with the skills required to solve intercultural conflicts would be a huge shortcoming for those who are educating future generations.

> "A society's formal system of learning--the education that it provides for its citizens--looks both within the society and at the same time outside it. On the other hand, it is the means to maintain, develop and transmit to the next generation elements of the distinctive culture that provides the group's particular source of identification and belonging. On the other hand, education is also a means to an understanding of the culture of others and to building a bridge between the two, between 'them' and 'us'." (Walker, 2007: 405)

In our case, the TNEP is providing our students, all of whom are Turkish, with the cultural foundation necessary for the formation of their identity and feeling of belonging, while the IBDP provides them with the cultural background necessary for them to form international ties and understand and empathise with the 'others' more effectively than any national curriculum can do. The IBDP also gives importance to the students' mother tongue and literature, which they study in considerable depth because of the comparative and interdisciplinary way in which the courses are designed. The teachers, both Turkish and international, also learn about each others' culture by living and co-operating together. They also exchange knowledge in their subject areas, thereby enriching the school curriculum. There are difficulties in bringing together people of different backgrounds, but the discussions, experience, and sometimes innovative ideas generated are invaluable. Accumulation of such contributions over the years is very important, and department heads are responsible for keeping such data banks for the future. Interaction among the local and foreign teachers, as described above address Research Questions 1 and 3 regarding the influence of the two programmes on each other as well as on the teaching styles of teachers, as described above.

Gardner (2004) reflects on the impact of globalisation on school curriculum. Noting that the most vexing issues facing the world today do not have boundaries, he gives examples such as AIDS, immigration, and global warming—solutions to which need

interdisciplinary thinking. He says that it is high time to bring multi-perspective thinking into our classrooms, and to teach young people formally about global systems, such as worldwide markets. The TNEP curriculum is weak in this respect. The contributions of the courses unique to IBDP, such as Business and Management, Economics, the Turkish Social Sciences School Based Syllabus and the TOK (Theory of Knowledge), are especially valuable in helping the students become accustomed to thinking in an interdisciplinary way, looking at issues from different perspectives, and increasing their general awareness. Once the teachers get used to running their courses in this way, these become their normal teaching skills and they apply the same skills in both programmes consistently, as seen from the analysis of the research data. This cross-fertilization produces new hybrids of knowledge, style, and skills. For example, the Turkish philosophy teachers at the Koç School are now working on a syllabus to convert the chronological philosophy syllabus of the TNEP to a more TOK-like programme.

The same view is reinforced by Friedman (2005), who looks at education from an economic perspective and thinks that it will play an important part in a 'flattened world', and points out that the businesses are moving to sites where the best educated workforce is with the most competitive infrastructure and environment for creativity and supportive government. It is not only the jobs that are going to go where the best-educated workforce is; such a work-force has also become very mobile in the globalised world, thanks to the education they receive. The Koç School has been graduating students with bilingual IB diplomas since 1996, which is not particularly long for a school, but in addition to our graduates who attend universities abroad, those who started working find jobs not only in the United States and the United Kingdom, but all over the world. This is an indication that the school goals of merging the national and the international have been on target.

In a report prepared by a group of international educators for UNESCO, entitled: *Learning: the treasure within*, similar traits appear among their recommendations for planning the education of the future. It points to global interdependence and states clearly that the traditional methods are not sufficient for preparing students for the complex world of the twenty-first century.

> "Traditional responses to the demand for education that are essentially quantitative and knowledge-based are no longer appropriate. It is not enough to supply each child with a store of knowledge to be drawn on from then on. Each individual must be equipped to seize opportunities throughout life, both to broaden her or his knowledge, skills and attitudes, and to adapt to a changing, complex and interdependent world." (Delors et al., 1996: 85)

There is no disagreement about the need to change the curriculum from a knowledge-based one to a skills-based one, including values and citizenship education. The pace of information accumulation and the advances in technology have made the storage of knowledge meaningless, while making skills to access knowledge a priority. For the first time, teachers are faced with falling behind the skill level of their students unless their continuous professional development needs are met. The presence of the IBDP has prioritised the use of technology at the Koç School. The workshops for teachers, the exchange of ideas with colleagues from all over the world, and the leadership of the IB in providing online materials have all played a role in forcing the school to feel that it cannot risk being behind in the technology.

The International Baccalaureate Diploma Programme has tried to meet the needs summarized by the UNESCO report mentioned earlier. Gathier (1996), ex-president of the IB organization, stated that Internationality has now become a normal characteristic of our contemporary society. At the Koç School, the hiring policy of having at least ten different nationalities on staff is an intentional decision to make internationality a normal feature of the school culture. Other ways to make international experiences available for the students and teachers are exchange programmes, European Union projects, and such extracurricular activities as Model United Nations. The school has also become quite well known internationally, so that many schools from around the world want to do projects or pay visits to the Koç School, and they are welcomed for reciprocal exchanges of cultural information.

CONCLUSION

In this Research Enquiry, the evolution of the Koç School convergent curriculum was analysed, mainly focusing on the effects of the teachers' teaching styles. In this chapter, the relationship between teaching styles and the creation of a convergent curriculum (merging the IBDP and the TNEP at the Koç School) has been summarised, based on the Research Questions and the outcomes of the analysis of observations and interview and the emerging themes from such analysis.

Morrison (2002: 190) states that in researching complexity, methodological pluralism is important because complexity is multi-perspectival. Use of different methodologies in this case study--such as the observations, interviews, and document analysis--looking at the issues from two different subject areas has been consistent with this understanding.

The curricula in schools are like an organic system evolving over time and therefore is transient and unpredictable. In the highly interdependent world in which we live, the interdependency of the different programmes is natural. The confluence of two different curricula, their influence on each other, and the teachers' teaching styles are complex and require attention to relationships because they cause emergence by self-organisation. The more effective models will survive while the inefficient ones die out reminding us of Darwin's theory of evolution. This transition to a new state gives rise to new structures-- in our case, the convergent curriculum. (See Figure 4.) Cowan (1978 in Waldrop, 1992: 356) talks about adaptation under conditions of constant change and unpredictability, assuming that transitions are going to continue forever and systems that remain continuously dynamic.

The dynamic atmosphere of the Koç School is a sign of a healthy and thriving school that comes up with innovations and better models all the time through the existence of two different curricula at the school. The teachers teach both of them, and therefore compare, contrast, connect, learn and come up with ideas that will result in the evolution of better models from the combination of the two experiences. This will keep us at the cutting edge, and far from being ordinary, as requested by Suna Kıraç, one of our founders. IB has to be in an endeavour to keep its innovative origin too, but it also needs to provide the stability of standards. This balancing of novelty and standardization which seem to be at odds with

each other and hard to attain is what makes education in the twenty-first century complex and exciting.

CHAPTER 7: IN RETROSPECT

Undertaking this Research Enquiry after long years of service at the Koç School in different capacities has helped me to see the work from a different perspective. This span of time has been an educational journey for me culminating with this Research Enquiry. Green describes (1995: 149-50) this feeling as:

> "To feel oneself en route, to feel oneself in a place where there are always possibilities of clearings, of new openings, this is what we must communicate to the young [of all ages] if we want to awaken them to their situations and to make sense of and to name their worlds."

During the research process, I read, observed, and related things to one another, discovered connections. It felt like taking in new scenery, clearing my head and making sense of the whole scene, and I have tried to describe these in this thesis.

Advantages and Limitations of a Part-Time Researcher

One of the biggest difficulties during the research was doing the work part time while carrying on the fulltime top administrative duties. The schedule at a big school is so intense that, it was very difficult to do uninterrupted work. I read a lot, but not being able to write it down soon after doing some focused reading caused loss of a lot of information. I had to use every holiday for doing some intensive literature work. Still, I felt I missed a lot of opportunities that a full-time student would have. On the other hand, I was aware that the experience and accumulation of insider knowledge on the issue I was investigating was an invaluable resource. I was part of the school culture; therefore I did not need to spend the extra time an outside researcher would have had to spend for understanding the context. The issues were the ones I had dealt with as a teacher or an administrator. Therefore, I had an in-depth understanding of the past and present problems, and I was in a role where I needed to be part of the planning for the future.

There were also some other advantages of doing this project while working at the school. I did not experience any difficulties in obtaining permissions or securing the collaboration of the teachers and department heads. Rescheduling classes and meetings in case of some unexpected changes was also easier than it would have been for an outsider.

Working away from the university limited the chances of working with the supervisors and the use of library resources and the chances of benefiting from the many seminars, lectures, and other opportunities on the university premises. Every time I was on campus, I was able to attend a few of these enriching activities, and my supervisors were very helpful in making sure that I received all the attention and help I needed in the short span of time I was in Bath. Therefore, intensive work was possible during my short stays.

The size of the sample group was another limiting factor. There are a number of teachers teaching the IBDP at school, but because of the policy of employing as many teachers as possible for the IBDP sections, it was difficult to find teachers teaching both the IBDP and the TNEP sections of the same class. Therefore, the piloting had to be carried out with teachers from subject fields other than the sample group.

Terminology

One of the first things I have struggled with during this Research Enquiry was clarification of terminology at every stage of the work. I saw that a lot of the complexity or haziness in the field was due to the inconsistent use of terminology or words used synonymously. Mosston (in Mosston and Ashworth, 2002) had called this 'tug of war' of terminology. Since education is very much part of daily life, the terminology use is not limited to those in the profession alone. This increases frequent and confused use of the words. In Chapter Three the terminological chaos in pedagogy was expanded upon. Although it is a contested word, because of its more intuitive connotations I have chosen to use the word 'style' more conspicuously. I believe that a teacher's role and influence on the student requires a holistic involvement of the person bringing together all the claims of teaching being an art, science and craft. However, I have not abandoned the use of other terms, such as 'methods', which has a more technical and 'approaches' a more general connotation, as well as other terminology as I thought fit for the purpose. Because I am a non-native speaker terminological and stylistic differences created more problems for me. I tried harder to find the right balance, while for a native speaker such an adaptation probably would not have been an issue. However, that has been a different kind of linguistic learning experience for me. I became aware and sometimes confused with differences in usage and meaning between British and American English.

Writing

It had been quite a long time since I had completed my master's degree, and I had done that work in the United States. As well as the differences in the terminology used, I discovered differences between the American and British academic writing. For example, the use of the first person was preferred and passive structures were not desirable in the United States, while the opposite was the case in the traditional European style.

Coming into academic work without a research background was also a disadvantage. My lack of experience with the technicalities of research often caused loss of time. I had to read about research techniques and then put into practice what I thought was necessary. No matter how detailed the writers on research methods were, there were points missed. For example, I read about and applied the piloting process very carefully. I repeated the piloting many times to make sure the observation schedule and the self-reflection forms were clear and easy to mark. I also planned how I was going to evaluate each one, but I had overlooked the difference between the two forms. In the end, when I wanted to aggregate data, I saw that was not possible because the contents did not correlate. As a result, I had to go back and re-do the self-reflection surveys with the same criteria that I had used in class observations. Only then, could they be reduced for summarization. Much later, I encountered a small paragraph about backwards piloting in Oppenheim (1992), but I wonder if I would have been able to understand its importance had I not experienced this flaw in the research design. This was an example of learning from experience, and the importance of technical details in research design.

Methodology

Retrospectively, if I had structured the Research Enquiry any differently, for example if I had used unstructured interviews, the same themes (time, overload, bias, complexity) would probably have emerged. Having an observation schedule is a little unnatural and somewhat limiting. On the other hand, it is also a tool for standardization and quantifying the observations because it guarantees gathering of the same data from all members of the sample group. Therefore, aggregation and reduction of data becomes possible and also meaningful.

Observation schedules presented a framework for observations and interviews as well as serving as a measure of reliability. It also provided a means for comparison of the observed

and the self-perception of the teachers. All in all having both qualitative and quantitative data makes verification of one with the other and I would still structure it similarly. However, I would probably be better in the choice of the questions, if I were to do it again.

Theories

Working as a practitioner for a long time, revisiting the learning theories that helped to shape educational developments from Heraclitus on, reviewing some old knowledge, looking at it in the light of the present circumstances and knowledge accumulation, and realising where the new theories are originating from, was inspirational for me. It was overwhelming to see the dialectical nature of some essential facts: the striking truth of Heraclitus' words that one cannot step into the same water twice, Socrates' urge for meaning-making that is the essence of constructivism used by the IBDP and the elementary programme of the TNEP; Plato's and Jesuits' methods and rote learning techniques that are still in use, Dewey's pragmatist approach which is at the core of the subject-based teaching, Piaget's developmental stages that show spontaneous maturation cause the learner to go into the next phase of developmental sophistication and reminding me that the school's development is as dynamic as the students'. When the conditions are right and the teachers have accumulated sufficient knowledge and experience, they develop the programme further. Nothing is lost, the accumulation of experiences paves the way for the next phase in the development of our eclectic approaches.

IMPLICATIONS FOR FUTURE RESEARCH

Because of the limitations imposed by the extent of the Research Enquiry within the University of Bath programme, I focused on exploring the relations between teaching styles and the creation of a convergent curriculum merging the Turkish National Education Programme and the International Baccalaureate Diploma Program within the Koç School, Istanbul, Turkey. There are many more dimensions of this convergence to be looked at, such as investigating it from the perspective of the students, comparisons with schools that do not merge the programme, repetition of the same observations with more teachers and different departments, and the influence of the international on the national and vice versa.

To be educated is not to have arrived at a destination; it is to travel with a different view. The educational doctorate programme and the culminating experience of the research

enquiry has been an enrichening experience for me, but to say that 'this is it' is not possible as one always discovers the need to enquire further on. Looking at the distance covered on this route, the merging of the national and the international is encouraging, even though it is sometimes hard to convince those who believe that doing the two programs, IBDP and TNEP together is unnecessarily difficult and burdensome for the students and the school. It is necessary to show them that the advantages outweigh the disadvantages, in that it helps teachers become a lot more accomplished, the resulting convergent program becomes holistic and students get the best of both worlds. The responsibility of schools and teachers to bring up students to cope with both local and global issues and become world citizen with ethical values has been addressed by many writers. Sampatkumar (in Hayden et al., 2007: 77) and Suarez-Orozco (2005), who write about the complexity of the world in which we live, say that understanding it will be important for meeting the future challenges:

> "Globalization engenders complexity. It is generating more intricate demographies, economies, politics, environmental choices, scientific realities, technology and media, cultural facts and artefacts, and identities.... An intellectually curious, cognitively autonomous, socially responsible, democratically engaged, productive, and globally conscious member of the human family in the 21st century cannot be educated in the 20th century factory model of education." (in Walker, 2007: 404)

Further research in this area may convince the policy-makers and educational decision-makers about the feasibility, and the benefit of such a holistic approach that they may help to facilitate the merging of the national and the international instead of standing in the way and making it difficult.

CONCLUSION

Bruner states:

> "Education is not simply a technical business of well-managed information processing, not even simply a matter of applying 'learning theories' to the classroom or using the results of subject centred 'achievement testing'. It is a complex pursuit of fitting a

> culture to the needs of its members, and its members and their ways of knowing the needs of the culture." (Bruner, 1996: 43)

The teacher's mastering ways of transmitting their subject matter knowledge to their students in the most efficient way is the technician's part of a teacher's job. They may make use of advanced technology; use objective, external or internal testing to assess subject-centred achievement standards. Even making use of this or that learning theory does not suffice alone because most of the learning theories focus on the individual only. However, in a world that gets smaller by the day, insistence on trying to keep things apart, pure and uninfluenced from each other does not make much sense. With the help of technology and multi-media, interdependence has increased rapidly in the world, and we need to be teaching the skills necessary for the new century. These needs and our ways of meeting these needs have an impact on our culture. Globalization, increasing interdependence of nations, makes it necessary that we educate the youth with the skill of cultural understanding for international connections and humanistic values while instilling in them knowledge of their national identity and values. Bruner calls this the 'complex pursuit of fitting a culture to the needs of its members' in the quote above.

In this research enquiry I have looked at the technical side of classroom applications and the style of the teachers. Teaching is a complex matter employing all of these and more. I observed that in order to make this reciprocal adjustment of needs and culture teachers have an important role to play. One of their major tools in affecting this change is values education either explicitly in the curriculum or implicitly in the extra-curricular activities or by way of modelling for their students. Understanding and using both the national and the international curricula, the IBDP and the TNEP, help them accomplish this challenge in a more holistic manner.

APPENDICES

APPENDICES

APPENDIX: 1

1. Goal and Mission Statements:

1.1. *General Principles Regulating the Turkish National Education System*

Goals of National Education

The general goals of National Education are:

1. To raise all individuals as citizens who are committed to the principles and reforms of Atatürk and to the nationalism of Atatürk as expressed in the Constitution, who adopt, protect and promote the national, moral, human, spiritual and cultural values of the Turkish Nation, who love and always seek to exalt their family, country and nation, who know their duties and responsibilities towards the Republic of Turkey which is a democratic, secular and social state governed by the rule of law, founded on human rights and on the tenets laid down in the preamble to the Constitution, and who have internalized these in their behaviour;
2. To raise them as constructive, creative and productive persons who are physically, mentally, morally, spiritually and emotionally balanced, have a sound personality and character, with the ability to think freely and scientifically and have a broad worldview, that are respectful for human rights, value personality and enterprise, and feel responsibility towards society;
3. To prepare them for life by developing their interests, talents and capabilities and providing them with the necessary knowledge, skills and attitudes and the habit of working with others and to ensure that they acquire a profession which shall make them happy and contribute to the happiness of society;

In this way, to increase the welfare and happiness of Turkish citizens and Turkish society, on the one hand, and to support and accelerate economic, social and cultural development within national unity and cohesion, on the other hand, and finally to make the Turkish Nation a constructive, creative and distinguished partner of contemporary civilization.

http://www.meb.gov.tr/Stats/Apk2001ing/Section_1/1Generalprincipals.htm

1.2. *IBDP Mission Statement*

> The International Baccalaureate aims to develop inquiring, knowledgeable and caring young people who help to create a better and more peaceful world through intercultural understanding and respect. To this end the organization works with schools, governments and international organizations to develop challenging programmes of international education and rigorous assessment. These programmes encourage students across the world to become active, compassionate and lifelong learners who understand that other people, with their differences, can also be right.
>
> www.ibo.org

1.3 *The Koç School Mission Statement*

Koç School is a Turkish school with a global perspective. Our multi-cultural academic community, innovative methodology, and coherent K-12 bilingual program engage all students in developing their intellectual and human qualities so that they will become confident, ethical leaders and responsible citizens of Turkey and of the world community. www.kocschool.k12.tr

APPENDIX II: Weekly Schedule of the Koç School

V.K.V. KOÇ ÖZEL LİSESİ
2007-2008 DERS YILI HAFTALIK ZAMAN ÇİZELGESİ

	PAZARTESİ	SALI	ÇARŞAMBA	PERŞEMBE	CUMA	
	7:55 Giriş Zili	*7:55 Giriş Zili*	*7:55 Giriş Zili*	*7:55 Giriş Zili*	*7:55 Giriş Zili*	
	8:00 – 8:10 *Bayrak Töreni*					
1	8:10 – 8:50	8:00 – 8:40	8:00 – 8:40	8:00 – 8:40	8:00 – 8:40	1
2	8:55 – 9:35	08:45 – 09:25	08:45 – 09:25	08:45 – 09:25	08:45 – 09:25	2
	9:35 – 9:50 *Uzun tenefüs*	09:25 – 09:40 *Uzun tenefüs*	09:25 – 09:40 *Uzun tenefüs*	09:25 – 09:40 *Uzun tenefüs*	09:25 – 09:40 *Uzun tenefüs*	
3	9:50 – 10:30	09:40 – 10:20	09:40 – 10:20	09:40 – 10:20	09:40 – 10:20	3
4	10:30 – 11:10	10:20 – 11:00	10:20 – 11:00	10:20– 11:00	10:20 – 11:00	4
5	11:15 – 11:55 Beşinci Ders *LH, 9, 10. Sınıf Öğle Yemeği*	11:05 – 11:45 Beşinci Ders *LH, 9, 10. Sınıf Öğle Yemeği*	11:05 – 11:45 Beşinci Ders *LH, 9, 10. Sınıf Öğle Yemeği*	11:05 – 11:45 Beşinci Ders *LH, 9, 10. Sınıf Öğle Yemeği*	11:05– 11:45 Beşinci Ders IBDP	5
					11:05 - 12:15 *Öğle Yemeği / Alıkoyma Spor Etkinlikleri Telafi Sınavları*	
6	12:00 – 12:40 *11 - 12. Sınıf Öğle Yemeği*	11:50 – 12:30 *11 - 12. Sınıf Öğle Yemeği*	11:50 – 12:30 11 IB FEN ders 11:50- 12:50 *11 - 12. Sınıf Öğle Yemeği*	11:50 – 12:30 *11 - 12. Sınıf Öğle Yemeği*	12:15 – 12:55	6
7	12:45 – 13:25	12:35 – 13:15	12:50 – 13:30	12:35– 13:15	13:00 – 13:15 *Bayrak Töreni*	7
8	13:30 - 14:10	13:20 – 14:00	13:35 – 14:15	13:20 – 14:00	13:25 Öğrenci Servisleri	8
	14:10 – 14:20 *Uzun tenefüs*	14:00– 14:10 *Uzun tenefüs*	14:20 – 15:15 **Ders Dışı Etkinlikler**	14:00 – 14:10 *Uzun tenefüs*	13:55 Öğretmen Servisleri	
9	14:20 - 15:00	14:10 - 14:50		14:10 - 14:50		9
10	15:05 - 15:45	14:55 – 15:35		14:55 – 15:35		10
	15:55 Öğrenci Servisleri	15:45 - 16:25 *Toplantı Saati*	15:20 Öğrenci Servisleri	15:45 - 16:25 *Toplantı Saati*		11
11	16:00 Öğretmen Servisleri	15:50 Öğrenci Servisleri	15:40 Öğretmen Servisleri	15:50 Öğrenci Servisleri		
		16:40 Öğretmen Servisleri		16:40 Öğretmen Servisleri		

APPENDIX III: The International Diploma Programme Groups

Group 1: Language A1

As it is essential to be knowledgeable about one's own language and culture, students take this course in their mother tongue. Works studied include some world literature to enable them learn about other cultures and make comparisons through literature.

Group 2: Second Language (A2, B, ab initio)

The courses in this group are in order of proficiency, ab initio being the beginner's level and A2 the level of high competency to study literature in a second language.

Group 3: Individuals and Societies

Nine subjects are available in this area: business and management, economics, geography, history, Islamic history, philosophy, psychology, social and cultural anthropology, and information technology in a global society.

Group 4: Experimental Sciences

Five subjects are available: biology, chemistry, physics, design technology, and environmental systems (SL only).

Group 5: Mathematics and Computer Science

Five subjects are available: mathematics (HL), mathematical (SL), mathematical studies (SL), further mathematics (SL), and computer science (elective).

Group 6: The Arts and Electives

Three subjects are available: music, theatre arts, and visual arts. This group is optional. In order to specialize in one of the other areas, the students may take one extra course from the other groups in lieu of this group.

School-based Syllabuses (SBS)

SBS programmes are designed by the individual schools with the permission and collaboration of the IB, to meet the local needs of the school. They may be substituted for any subject from group 2 to 6.

Trans-disciplinary Subjects

This is a recent innovation. With the trans-disciplinary option students can satisfy the requirements of two groups at the same time, leaving time for them to have another choice for their sixth group. These new trans-disciplinary subjects were launched in 2008.

APPENDIX IV: The Koç School Convergent Curriculum Groups (represented by the Hexacircle in Chapter 2.

Group 1: Language A- (Turkish (HL or SL mother language and literature)
Instead of studying it with the TNEP approach, which is anthological, with excerpts from major texts, the goals of the TNEP are met using IBDP methods with authentic full texts from Turkish writers, including contemporary ones (unlike the mainly classical ones in the TNEP), and a choice of titles in translation from world literature, excluding English originals which are studied in the Language A2 option. The same syllabus is implemented for both the Regular and the IBDP groups. Thus, the goal of convergence has been accomplished in Group 1.

Group 2: Second Language – (English A2, HL or SL)
Since the Koç School is a bilingual school with Turkish and English accepted as the two languages, the goal is to make the students fluent in their second language. Therefore, language A2, which is for nearly fluent speakers, is adopted as the English syllabus for the whole school. It does not matter whether the student chooses to take the IBDP or the Regular programme; the goal of convergence has been reached in this group.

Group 2a: Second Foreign Language (Third language French or German HL or SL or ab initio)
Spanish is will be added to the modern-languages option at the school starting in 2008. In the TNEP, this is a two-hour course offered to fulfill the requirements of the European Union. The Koç School offers it for four periods a week so that the students can really master a second foreign language. It was decided unanimously that two periods would not be enough for such mastery. This shows our commitment to languages and internationalism, as in IBDP. Convergence of the programme is not a problem in this area since the same programme is given to the whole school.

Group 3: Individuals and Societies – (Turkish Social Studies, TSS),
According to IBDP rules, Social Studies can be taught at standard level only. The TNEP requires that the culture courses, such as history, geography, sociology, philosophy, and religion, have to be studied in the mother tongue. Because of this rule, in the first years of IBDP implementation at the Koç School, business and management, and economics were

the only subjects that could be offered in Group 3. The students had to take the 'culture courses' of the TNEP in Turkish. This increased the number of subjects and periods the students had to take in a week. While looking for a solution to lighten this burden, an innovative idea was raised. If all the social sciences periods could be merged, we would have enough time to allocate for an IBDP course. The Chile and the Pacific Basin SBS became a model for us, but we had two significant barriers. First was the language barrier, because Turkish was not among the official IB languages as Spanish is, so we did not know whether the IB organisation would permit us to teach the course in Turkish. Second, even if the IB gave permission, would we be able to convince the MNE to change the syllabus so radically, as there were no such integrated courses in the TNEP. Actually, we were making a radical change not in content but in methodology. Instead of compartmentalized, separate subjects, we were going to use an interdisciplinary approach and integrate history, geography, and sociology.

As a result, dreams came true, approvals were taken. The process was arduous, but exciting. Now, the Turkish SBS is a truly integrated course and is enjoyed by the students and teachers alike. The impact of the new course on the whole department and the teachers has been great in teaching style and methods used. It converted the teachers from passive to active state in terms of preparing materials, lesson planning, and their implementation.

Group 3a: TNEP mandated subjects (**Traffic, Civil Defense and Religion**)
These are mandated by the Constitution; therefore, even the Ministry of Education cannot make any changes in these one-hour courses. They are taught in Turkish.

Group 3b: Philosophy (for all); Psychology and Logic (for Social Science Track)
Philosophy is a two-period mandatory subject for seniors. Teachers are working on TOK style changes for this subject to integrate it with TOK, but it needs to be taught in Turkish.

Psychology and logic, only for students on the social science track are taken as a two-period course in Turkish in the eleventh grade. The students can take IBDP psychology in English, too.

Group 4: Experimental Sciences (Physics, Chemistry, Biology, or Environmental Systems, SL (HL for Science Track only)

The second science is chosen from the Biology, Chemistry and Physics group.
As three sciences: biology, chemistry and physics are required courses for TNEP science track students. Those students who choose the science track are overloaded with the science courses in terms of the IBDP. The first science subject of their choice is HL only. After the syllabus revisions in science, converging the TNEP and the IBDP became more challenging because the topics to be covered in TNEP are now 20 percent more than the original. To cover all the topics required by the TNEP in the same depth, with the interdisciplinary Group 4 research projects and their presentations present a challenge. All three sciences consume much of the weekly programme causing an imbalance in the whole. Maybe they need to be more innovative and think of the whole curriculum to restore the balance of the programme. However, the universities that give more credit to the science overload do not help with this decision.

Group 4a: Second Experimental Science (HL or SL)
The science track students who do the IBDP take this subject in lieu of the arts in the Group 6 electives.

Group 4b: Third Experimental Science (SL)
Chosen from the biology, chemistry and physics group, the third science subject is taken as an elective to fulfil the TNEP requirements for the science track students. The downside of this choice is that it does not leave the students any time to take other electives outside of the science area. While permitting them to specialize in sciences, it deprives them of a more holistic basic education. Environmental systems is generally taken by students who are considering universities abroad; it is not one of the subjects is on the Turkish University Placement Examinations (ÖSS) because it is not a mandatory science subject in the TNEP.

It is interesting to note that, when we received permission from the Ministry of Education for the IB students who would be applying to universities abroad to study two science subjects instead of three, our college counsellor was not happy, insisting that the students would lose their competitive edge at the most selective schools, mainly in the United States.

Group 5: Mathematics (HL or SL)

The mathematics programme of the TNEP falls somewhere between the HL and the SL in content and rigorousness. Most students take Mathematical Studies (SL) at the Koç School because they are advised to do so. In fact, around the year 2000, many more students were taking HL, and they were discouraged from doing so by the then-head of department, on the grounds of world statistics. However, the requirements of the TNEP for the science track are not met with the SL subjects, and there is a strong tradition of a rigorous mathematics education in Turkey. This is causing some disappointment with our mathematics programme. Comparing it with another school, Ankara's TED College, which has an IB population similar to ours, and seeing them succeed, the Koç School Mathematics Department head has stated that he will be encouraging more students to take the IBDP mathematics HL in the future.

For the same reason-fear of lowering standards- we have not offered the less rigorous Mathematical Studies (SL) course up to now. In the future, however, for the students of the social sciences and language tracks who do not need to take mathematics for the TNEP, and as a result have an imbalanced programme that makes the IBDP impossible, offering the easier mathematics programme may make it possible for them to do the IBDP.

Group 5a: Geometry (TNEP only)

In the Turkish curriculum geometry is taught (in English) separately from mathematics as a weekly two-period course in all high school years; analytical geometry is taught in the senior year. This has been quite surprising to the teachers trained and taught in Western countries who have had IBDP experience. It has been a challenge for the department to provide the assistance and the materials in English for these teachers to do a satisfactory job. In our attempts to create a Convergent Curriculum, the geometry hours were reduced to one hour and given to the same teachers teaching mathematics to the same group and expected them to be able to merge it in their teaching. This will continue to be a challenge for the department, as teacher turnover among international teachers is quite high.

Group 6: Arts and Electives (HL or SL)

Art and music are the two IBDP courses offered at the Koç School. In the TNEP, the art and music electives are offered only two periods a week. The IBDP option to have a more comprehensive study is very attractive for those students with artistic talents. The school

policy restricting ‘certificate only’ options, and the more rigorous mathematics requirement for the whole school, kept some of these students from taking the IBDP. This will be changed to increase the students’ options for the IBDP in the future.

Appendix V.1: Draft of the Observation Schedule dated 7 December 2005

Observation Schedule
Teacher name: **Experience:**

Education: **In Turkey** **both:**

Class observed: **Section:** **Reg.:**

a- Teacher Talk:	0	5	10.	15	20	25	30	35	40
1-giving info (factual)									
2-re-teaching (review)									
3- make comparison									
4-make connections (Lint)									
5-uses creativity									
6-encourages									
7-ref to IB									
8-ref to ÖSS									

b- Questions									
1-procedural									
2-narrow/restricted									
3-substantive									
5-challenging									
6-assessing									

c- Answers									
1- adressing group									

d- Teacher Behaviour									
1- Showing									
2- Drawing									
3- Demonstrating									
4- Affirming									
5- Encouraging									
6- Discouraging									
7- Neatural comments									
8- Feedback providing									

Appendix V.2: The Final Form of Observation Schedule dated 6.4.2006

Observation Schedule

Teacher name: **Experience:**

Education: **In Turkey:** **Abroad:** **both:** **Date :**

Class observed: **Section:** **Reg.:**

a- Teacher Talk:	**1**	**2**	**3**	**4**	**5**
1-giving info (factual)					
2-teaching (review)					
3- make comparison					
4-make connections (RL,Int)					
5-uses creativity					
6-ref to IB					
7-ref to ÖSS					
8- giving instructions					
9- Explaining					
b - Questions					
1-procedural					
2-narrow/restricted					
3-substantive					
4-challenging					
5-assessing					
c- Questions & Answers (Clarification)					
1- Addressing the group					
2- Addressing the individual					
d- Teacher Behaviour					
1- Showing					
2- Drawing					
3- Demonstrating					
4- Affirming					
5- Encouraging					
6- Discouraging					
7- Natural comments					
8- Feedback providing					
9- Writing on board					
10 – Walking around					
11 – Reading					
12 - Checking					

APPENDIX VI: SELF-REFLECTION FORMS

Self - Reflection Form

Teacher Self-reflection Form
For IB classes place an I, for regular an R to show where you are in ascending order.

		1	2	3	4	5
1. Relationship						
w/Students						
w/colleagues						
w/Parents						
2. Pressure felt:						
a)time						
b)grade						
c)univ. (ÖSS/SAT)						
d)parental						
3. Attitude						
a)bias toward subject matter						
b)bias toward students						
c) discipline						
4. Instruction						
a)depth						
b)creativity						
c)pace						
d)life connections						
e) HW **5. Questions**						
a. Frequency						
b.quality						
c. opportunity for ss **6. Assessment**						
a)challenging						
b)versatile						
c)rote						
7. Creativity						
a) Teacher						
b) Student						
8.						

APPENDIX VII: Summary of Pilot Sample Group Results

	TB		**TA**			
	IB-TB	R-TB	IB-TA	R-TA	IB	R
Teacher Talk	**14**	**18**	**28**	**30**		
1-giving info (factual)	4	3	15	22	19	25
2-teaching (review)	1	3	1	3	2	6
3- make comparison			2	3	2	3
4-make connections (RL,Int)			1		1	0
5-uses creativity		2			0	2
6-ref to IB			1		1	0
7-ref to ÖSS			1		1	0
8- giving instructions	7	1		2	7	3
9- Explainig	2	9	7		9	9
Questions	**11**	**13**	**36**	**27**	**47**	**40**
1-procedural	5	3	4	6	9	9
2-narrow/restricted	4	7	15	11	19	18
3-substantive	1	2	10	10	11	12
4-challenging		1	7		7	1
5-assessing	1				1	0
Questions & Answers (Clarification)	**18**	**35**	**28**	**30**	**46**	**65**
1- Addressing the group	10	11	15	16	25	27
2- Addressing the individuale	8	24	13	14	21	38
Teacher Behaviour	**25**	**19**	**49**	**55**	**74**	**74**
1- Showing	1	3	8	14	9	17
2- Drawing	5		7	7	12	7
3- Demonstrating		2	9	9	9	11
4- Affirming	1	3	4	10	5	13
5- Encouraging	3	1		1	3	2
6- Discouraging	2	1			2	1
7- Natural comments	2	3	4	2	6	5
8- Feedback providing			6	1	6	1
9- Writing on board	2	1	8	4	10	5
10 - Walking around	9	4	3	5	12	9
11 – Reading		1		2	0	3
12 – Checking					0	0
TOTAL	**68**	**85**	**141**	**142**		

APPENDIX VIII: ACCOUNT OF THE OBSERVATION SCHEDULE

The observation results have been analysed and then summarized below in an account form.

A-Teacher Talk: (IB 353/R 304)

In general, it seemed difficult to point out whether there is more teacher talk in IB or Regular classes looking at distributions, but when all the ticks are added up, it becomes evident that teachers talk more in the IB classes (IB 353/R 304).
In the categories of: giving factual information (1 below) and review teaching (2 below), there seemed to be no difference at all, perhaps pointing out to the universality of the methods for these. Making connections (4) and comparisons (3) were in fact very little used methods on the whole, however, when they were used, they were observed almost twice in the IB groups.

There was also almost no use of creativity (5 below). However, no observation of reference to IB (6) or (7) OSS (Turkish University exams) is welcome according to the general school policy of a convergent curriculum and one school culture.
Giving Factual information (1), giving instructions (8) and explaining the lesson (9) were the three major sorts of Teacher talk done. 'Explaining', the major type of teacher talk as obvious from the numbers ticked is about twice as big as the next biggest group, 'giving factual information' when compared with the other types of teacher talk. The difference between the two groups was only five (142 IB and 137 R), which is quite insignificant when the numbers are that high. Therefore, it can be concluded that these types of 'teacher talk' does not seem to be program dependent (IB or Regular). Below is a break down of the types of Teacher Talk observed.

1- All Teachers give factual info. (71 IB/70 R)

-In general the amount is either same or close in IB and R.

2/9 same

5/9 similar

2/9 different

-Math and science group gives more factual data: range 7-22

-Languages group gives less factual data: range 1-5

2- Teaching review: (14 IB/18 R)

Consistently very little use: range (1-8)

7/9 close (0-5 range)

1/9 same (2/2)

1/9 different (8 IB/0 R)

3. Making comparison: (20 IB/9 R)

- Very little use, generally used by the Languages group,

Same or close: range (0-7)

4/9 same /null)

4/9 close

1/9 different (5IB/0 R)

No comparison was observed in the mathematics classes, with one exception. The math teacher, who used it, used the same example in both sections (IB 1/ R2). The rest were in the Foreign Language classes and twice as many in the IB sections (20 IB/9 R). This reflects IB expectations and it is easy in the language lessons. That is why it was surprising that the pilot English lessons did not contain any use of comparison.

4. Make connections (Real Life, Interdisciplinary.) (35 IB/20 R)

- Generally used by the FL department

Range: 0-13

4/9 same

4/9 close

1/9 different (13IB/4 R)

This may be showing a characteristic of the IB program. Its vision and mission requires that multicultural connections are made. By nature of the foreign languages, it is easier to make such connections and that was where the observations were made mainly. In math and sciences, international connections may be unnatural, but why not have more real life connections? Very few such attempts were made and their total in both IB and R were the same, 3/3.

5. Uses creativity: (2 IB/ 3 R)

-minimal observation, (range: 0-2 by Lang.)

7/9 same (null)

2/9 close (L)

Some teachers mentioned that creativity was already built in the IB program, and therefore the teacher did not need to make an extra effort to be creative. On the other hand, because the Regular programs of the Ministry of Education have not been spelled out in detail as the IB program, it fell on the teacher to bring in creativity. Teachers of the Regular group complained of the overload of content that needs to be covered. They feel that there is no time left for more creative methods and styles to be used such as portfolios in IB. This was an explanation for more direct styles of teaching that they resort to. However, it was not easy to detect much use of creativity in either of the groups. The number of ticks (2/3) indicates this.

6. Ref. to IB: (3 IB/ 0 R)

- Minimal use (0-1)

7/9 same (null)

2/9 close (1IB/0)

One language teacher stated that students do not enjoy such reference. They were told it was the same program.

One math teacher said there is a polarization between the groups. They think they are doing very different things, where in fact they are not.

To create a convergent curriculum for the school is a goal set in the Strategic Plan of the school. This conforms to the eclectic approach adopted since the foundation of the school. As a Turkish school with a bilingual program, multinational faculty and Turkish students raised to succeed in an increasingly globalized society, the aim is to merge the best of both a national and an international curriculum. Therefore the teachers try not to over-pronounce the IB because the aim is to bring them together as much as possible and not polarize them or cause split groups. The goal is to attain a curricular balance between these two curricular groups.

7. Ref to OSS: (1 IB/0 R)

- Almost none (0-1)

8/9 same (null)

1/9 close (1IB/0R) in pilot

This is very good because the school policy is that we do not teach to the tests, i.e. university entrance tests (ÖSS), but we prepare them for higher education and life. However, this is a common point of pressure from the Regular group and parents, and we accept that it will continue to be unclear until conditions of acceptance into Turkish universities change.

8. Giving instructions: (IB 69/ R 57)

- used by all, range: 0-23

1 same (3/3)

3 close

5 different

It was interesting that this common aspect of the job was highlighted by the teachers indicating a difference for the IB group. There was only one teacher that had exactly the same number of ticks in this column, three were close, and five of them showed quite a variation. This was actually listed as the 8th type of Teacher Talk on the Observation Schedule, but it was the first on the list that so many showed a difference between the IB and the Regular group. There were comments from the teachers such as, “IB students demand more instructions.”

The difference in the number of instructions given in both groups in favour of the IB group was indicated as a demand coming from the IB students by at least four of teachers in their de-briefing interviews after the observations. This is connected to the study habits instilled in the student by the IB curriculum. As the teachers have repeatedly pointed out, if IB plans are laid out in full or in a ‘fool-proof’ way, the students get used to this planned approach and before starting their work, they would want the full instructions, so that they can also have a plan for their study. This may be part of the IB methodology developing the work habits of the students. The difference in both sections in their requests from the teachers showing their needs to get on with their work show that the teachers are not consistent in demanding the same from all their students, and as a result are not instilling in both groups the same study habits. Perhaps starting at 15, IBDP is quite late to start instilling new study skills in the students.

9. Explaining: (IB 142/ R 137)

-used by all: range: 0-29

No same

2 similar

7 different

Explaining is one of the most characteristic teaching methods employed by all the teachers. The number tick marks that increased dramatically compared to all other types of teacher talk exemplifies this aspect of teaching. This is also the line that has most columns (7/9) that show a discrepancy of five and above. However, when looked closely, the differences are not vast either. The biggest difference is nine, and that is in the class of the teacher that had most difficulty adjusting to Turkey as a new comer. In the total, although the quantity of marks is big (142/137), the difference between the IB and the Regular groups receiving explanations from the teacher is just five. This indicates that, for the teacher, the difference in the program, whether it is IB or MNE does not really matter. They go in and explain what they need the students to understand. This is teacher-centred pedagogy.

TOTAL OF TEACHER TALK: IB 353/ R 304

b. Questions:

Types of questions most used were the narrow/restricted and substantive type of questions. This is an indication that there is a lack of creativity in teachers' teaching and also in their expectations from students. While there were more narrow questions used in IB (115IB/78R), there were more substantive questions in Regular (81IB/107R). The number of Challenging Questions that requires creativity is much lower (59 IB/ 57 R). That shows that teachers are more concerned about making sure that the students learn the content in the syllabus rather than having them use more creative discovery, exploratory techniques. The minimal use of questions labelled as assessment type made me think that this classification might be redundant as all types of questions are prepared to check student comprehension anyway.

Below is a breakdown of the question types observed.

1. Procedural: IB 44/R 35

Range 0-9, consistent use but not many times, as expected to clarify classroom applications. It does not vary according to department or whether it is the IB or the Regular program.

1 same (3/3)

6 close

2 different

2. narrow/restricted: IB 115/ R78

Range: 0-25, used by all extensively, does not vary according to department or whether is the IB or the Regular program.

Non same

4 close

5 different

3. Substantive: IB 81/ R107

Range: 0-21, used by all extensively, does not vary according to department or whether it is the IB or the Regular program.

1 same (10/10)

2 close

5 different

In the pilot observations, there was almost no difference between the groups with these questions. However, in the others, the picture was different. There are more of these questions used in the Regular group in general. In mathematics, the anxiety of the teachers to cover the extra content of the MNE program may be an explanation for having more of these questions. However, this does not explain it in the languages department. Therefore, we cannot assume this is the reason. It is more likely that the reason is rooted in the simple teacher centred methodology. After the narrow, restricted group of questions, it is a very straightforward way of checking student understanding. Unfortunately, it does not require creativity, and most often, not much higher order thinking is involved either.

4 challenging: IB 59/ R57

Range: 0-16.

Non same

6 close

3 different

It may be said that challenging questions are a little more used with the IB group in the languages, but with the Regular group more in Maths. However, in total, the difference is almost non-existent, only 59/57. The more worrying part is that challenging questions are used so little. The teachers are probably too much into exhibiting their own craft that they forget to challenge the students for more active participation. It may also be that as the observer, I was not able to assess the amount of challenge present in the questions, especially in Math. However, as I am a teacher of languages, this is not a valid assumption, at least in this area.

5. Assessing: IB 13 /R 1

Range: 0-5 seldom used.

5 same (null): This indicates that majority did not use this type of questions at all.

3 close IB/R (1/0, 5/1, and 2/1) there were so few in numbers, that it was close to null.

1 different (5IB-0)

The lack of assessing type of questions may also be indicative of the fact that they are actually not necessary. Teachers already assess the understanding of the students with the other questions in an on-going manner. So looking for this type of questions specifically was probably redundant. An exception could be in an oral quiz, which has a place in the traditional Turkish system, but in more contemporary teaching that is not exercised much and is being replaced by more process oriented methods such as projects and presentations thereof. However, in the IB system, there are oral presentations and examinations, some of which are taped and sent for external evaluation or moderation, but in the classes that I observed, this was not in question.

TOTAL OF QUESTIONS: IB 311/ R 307

c. Questions and Answers (Clarifications (IB 280/327)

As a whole the teachers gave more clarifying answers to the Regular group. During the interviews teachers had stated that the group dynamics was very good in the

Regular group, they were better in doing homework and getting prepared. This would have made them ready to ask for clarifications.

1. Addressing the group: IB 162/ R 142

(Except for one IB section that had 1 student)

Range: 9-28

Non same

3 close

6 different

The IB students have 162 clarifications or answers to their questions as a group while the Regular group has 142. This is indicative of the fact that the IB group asked more questions to the teacher and demanded more clarifications. This is consistent with the observations above in the Teacher Talk section under giving instructions IB group had asked for more instructions (69/57) and explanations (142/137). This is also confirming the Teacher perceptions in the Self-Reflection Forms and Interviews. They had described the IB students as asking for more instructions.

2. Addressing the individual: IB 155/ R 180

Range: 7-31

Non same

5 close

4 different

The Regular group was observed to get more individual attention (IB 155/R 180). This is also conforming to the Teacher perceptions and interviews. While describing the Regular student, they had said Regular students were more demanding for explanations from the teacher. They ask more questions, therefore naturally get more clarifications. One teacher had defined them as they try to get more out of the teacher. On the other hand, another teacher had said IB students want more individual attention, but in the observations, although the results are close, she also addressed the Regular group more individually (IB 25 /R 27).

TOTAL OF CLARIFICATIONS: IB 280/ R 327

d- Teacher behaviour:

1. Showing : IB 92/ R 128
2. Drawing : IB 22/ R 38
3. Demonstrating: IB 38/ R 55
4. Affirming : IB 108 / R 98
5. Encouraging : IB 32 / R 44
6. Discouraging : IB 12 / R 9
7. Natural Comments: IB 35 / R 42
8. Feedback Providing: IB 68/ R 47
9. Writing on board .IB 80 / R 70
10. Walking around : IB 65 / R 50
11. Reading : IB 23 / R 32
12. Checking : IB 66 / R 86

Out of 12 aspects of a teacher's job listed above, there was a balance in the observations made. Six of them were observed more in IB sections, and the other six more in the Regular sections.

General visual presentations such as showing, drawing and demonstrating took place more in Regular sections while more individual attention giving such as affirming, feedback providing, walking around were observed in IB classes, both giving cues about the nature of the methods employed in these programs.

APPENDIX IX: OBSERVATION SCHEDULE SUMMARY

Observation Schedule

	TA1-IB	TA1-R	TA2-IB	TA2-R	TA3-IB	TA3-R	TA4-IB	TA4-R	TB1-IB	TB1-R	TB2-IB	TB2-R	TB3-IB	TB3-R		
	TA1		**TA2**		**TA3**		**TA4**		**TB1**		**TB2**		**TB3**		**IB**	**R**
a- Teacher Talk:	**47**	**45**	**40**	**46**	**37**	**33**	**63**	**48**	**56**	**62**	**24**	**14**	**47**	**13**	**314**	**261**
	TA1-IB	TA1-R	TA2-IB	TA2-R	TA3-IB	TA3-R	TA4-IB	TA4-R	TB1-IB	TB1-R	TB2-IB	TB2-R	TB3-IB	TB3-R		
1-giving info (factual)	8	7	14	13	8	9	13	8	5	5	1	1	3	2	52	45
2-teaching (review)	8		2	3	1	5	2		1	2	2	2	1		17	12
3- make comparison			1	2					7	3	5		5	1	18	6
4-make connections (RL,Int)			1				2	3	13	13	1		13	4	30	20
5-uses creativity													2	1	2	1
6-ref to IB													1		1	0
7-ref to ÖSS															0	0
8- giving instructions	15	16	2	3	3	3	23	16	6	15	6	1	7		62	54
9- Explaining	16	22	20	25	25	16	23	21	24	24	9	10	15	5	132	123
b - Questions	**11**	**28**	**41**	**52**	**31**	**12**	**54**	**51**	**56**	**59**	**27**	**37**	**44**	**29**	**264**	**268**
1-procedural	6	3	5	2	3	3	9	4	1	9	7	5	4		35	26
2-narrow/restricted	2	10	12	16	16	7	20	16	17	25	11	16	18		96	90
3-substantive		10	11	21	9	2	16	19	17	13	4	13	12	17	69	95
4-challenging	3	5	8	13	3		9	12	16	11	5	3	8	12	52	56
5-assessing			5						5	1			2		12	1
c- Questions & Answers (Clarification)	**33**	**44**	**35**	**43**	**52**	**31**	**46**	**44**	**7**	**45**	**19**	**29**	**42**	**21**	234	257
1- Addressing the group	11	20	15	20	28	17	21	17		14	9	17	16	10	100	115
2- Addressing the individuale	22	24	20	23	24	14	25	27	7	31	10	12	26	11	134	142
d- Teacher Behaviour	**85**	**85**	**109**	**131**	**103**	**70**	**130**	**126**	**64**	**127**	**31**	**38**	**56**	**32**	**578**	**609**
1- Showing	9	7	12	21	18	15	12	12	11	31	5	9	16	16	83	111
2- Drawing		2	4	10	3	7	3	6		5		1			10	31
3- Demonstrating	2	5	8	8	5	6	11	12	2	12		1	1		29	44
4- Affirming	12	15	21	22	16	6	16	17	19	15	6	3	13	7	103	85
5- Encouraging	2	4	11	4	2	2	9	9	9	14	3	3	3	6	39	42
6- Discouraging	6	3	1				2			2			1	3	10	8
7- Natural comments	4	5	9	12	4	9			6	8	4	3	2		29	37
8- Feedback providing	10	4	16	13	5	2	13	17	11	6	7	4			62	46
9- Writing on board	10	22	15	16	28	13	12	7		5	3	2	2		70	65
10 - Walking around	18	4	3	1	4	2	24	19		12	2	3	3		54	41
11 - Reading	7	2					1	3	6	8			9		23	13
12 - Checking	5	12	9	24	18	8	27	24		9	1	9	6		66	86

APPENDIX X: RETROSPECTIVE INTERVIEW FORM

Observation Schedule (adapted for teacher self-reflection)

Teacher name: **Experience:**

Education: **In Turkey:** **Abroad:** **both:** **Date :**

Class observed: **Section:** **Reg.:**

a- Teacher Talk:		**1**	**2**	**3**	**4**	**5**
	1-giving info (factual)					
	2-teaching (review)					
	3- make comparison					
	4-make connections (RL,Int)					
	5-uses creativity					
	6-ref to IB					
	7-ref to ÖSS					
	8- giving instructions					
	9- Explaining					
b -	**Questions**					
	1-procedural					
	2-narrow/restricted					
	3-substantive					
	5-challenging					
	6-assessing					
c- Questions & Answers (Clarification)						
	1- Addressing the group					
	2- Addressing the individual					
d-	**Teacher Behaviour**					
	1- Showing					
	2- Drawing					
	3- Demonstrating					
	4- Affirming					
	5- Encouraging					
	6- Discouraging					
	7- Natural comments					
	8- Feedback providing					
	9- Writing on board					
	10 - Walking around					
	11 – Reading					
	12 – Checking					

APPENDIX XI.1

Comparison of the averaged data of the IBDP and TNEP Mathematics and IBDP and TNEP Languages classroom behaviour observed.

COMPARATIVE TABLE

		IB-MATH	R-MATH	MATH	IB-LANG	R-LANG	LANG	MATH AVG	LANG AVG	IB-MATH AVG	R-MATH AVG	IB-LANG AVG	R-LANG AVG
a- Teacher Talk:													
	1-giving info (factual)	43	37	80	9	8	17	20	6	11	9	3	3
	2-teaching (review)	13	8	21	4	4	8	5	3	3	2	1	1
	3- make comparison	1	2	3	17	4	21	1	7	0	1	6	1
	4-make connections (RL,Int)	3	3	6	27	17	44	2	15	1	1	9	6
	5-uses creativity	0	0	0	2	1	3	0	1	0	0	1	0
	6-ref to IB	0	0	0	1	0	1	0	0	0	0	0	0
	7-ref to ÖSS	0	0	0	0	0	0	0	0	0	0	0	0
	8- giving instructions	43	38	81	19	16	35	20	12	11	10	6	5
	9- Explaining	84	84	168	48	39	87	42	29	21	21	16	13
b - Questions		137	143	280	127	125	252	70	84	34	36	42	42
	1-procedural	23	12	35	12	14	26	9	9	6	3	4	5
	2-narrow/restricted	50	49	99	46	41	87	25	29	13	12	15	14
	3-substantive	36	52	88	33	43	76	22	25	9	13	11	14
	4-challenging	23	30	53	29	26	55	13	18	6	8	10	9
	5-assessing	5	0	5	7	1	8	1	3	1	0	2	0
c- Questions & Answers (Clarification)		166	162	328	68	95	163	82	54	42	41	23	32
	1- Addressing the group	75	74	149	25	41	66	37	22	19	19	8	14
	2- Addressing the individual	91	88	179	43	54	97	45	32	23	22	14	18
d- Teacher Behaviour		427	412	839	151	197	348	210	116	107	103	50	66
	1- Showing	51	55	106	32	56	88	27	29	13	14	11	19
	2- Drawing	10	25	35	0	6	6	9	2	3	6	0	2
	3- Demonstrating	26	31	57	3	13	16	14	5	7	8	1	4
	4- Affirming	65	60	125	38	25	63	31	21	16	15	13	8
	5- Encouraging	24	19	43	15	23	38	11	13	6	5	5	8
	6- Discouraging	9	3	12	1	5	6	3	2	2	1	0	2
	7- Natural comments	17	26	43	12	11	23	11	8	4	7	4	4
	8- Feedback providing	44	36	80	18	10	28	20	9	11	9	6	3
	9- Writing on board	65	58	123	5	7	12	31	4	16	15	2	2
	10 - Walking around	49	26	75	5	15	20	19	7	12	7	2	5
	11 – Reading	8	5	13	15	8	23	3	8	2	1	5	3
	12 – Checking	59	68	127	7	18	25	32	8	15	17	2	6

SUM OF AVERAGES					
MATH	LANG	IB-MATH	R-MATH	IB-LANG	R-LANG
813	581	412	402	273	308

APPENDIX XI.2

COMPARATIVE TABLE OF SUMS

		IB	R	IB-MATH	R-MATH	IB-LANG	R-LANG	MATH	LANG
Teacher Talk:		**314**	**261**	**187**	**172**	**127**	**89**	**359**	**216**
	1-giving info (factual)	52	45	43	37	9	8	80	17
	2-teaching (review)	17	12	13	8	4	4	21	8
	3- make comparison	18	6	1	2	17	4	3	21
	4-make connections (RL,Int)	30	20	3	3	27	17	6	44
	5-uses creativity	2	1	0	0	2	1	0	3
	6-ref to IB	1	0	0	0	1	0	0	1
	7-ref to ÖSS	0	0	0	0	0	0	0	0
	8- giving instructions	62	54	43	38	19	16	81	35
	9- Explaining	132	123	84	84	48	39	168	87
Questions		**264**	**268**	**137**	**143**	**127**	**125**	**280**	**252**
	1-procedural	35	26	23	12	12	14	35	26
	2-narrow/restricted	96	90	50	49	46	41	99	87
	3-substantive	69	95	36	52	33	43	88	76
	4-challenging	52	56	23	30	29	26	53	55
	5-assessing	12	1	5	0	7	1	5	8
Questions & Answers (Clarification)		**234**	**257**	**166**	**162**	**68**	**95**	**328**	**163**
	1- Addressing the group	100	115	75	74	25	41	149	66
	2- Addressing the individual	134	142	91	88	43	54	179	97
Teacher Behaviour		**578**	**609**	**427**	**412**	**151**	**197**	**839**	**348**
	1- Showing	83	111	51	55	32	56	106	88
	2- Drawing	10	31	10	25	0	6	35	6
	3- Demonstrating	29	44	26	31	3	13	57	16
	4- Affirming	103	85	65	60	38	25	125	63
	5- Encouraging	39	42	24	19	15	23	43	38
	6- Discouraging	10	8	9	3	1	5	12	6
	7- Natural comments	29	37	17	26	12	11	43	23
	8- Feedback providing	62	46	44	36	18	10	80	28
	9- Writing on board	70	65	65	58	5	7	123	12
	10 - Walking around	54	41	49	26	5	15	75	20
	11 – Reading	23	13	8	5	15	8	13	23
	12 – Checking	66	86	59	68	7	18	127	25

APPENDIX XII: IB LEARNER PROFILE

http://www.ibo.org/heads/newheads/documents/learnerprofileEng.pdf
http://www.ibo.org/programmes/profile/

The aim of all IB programmes is to develop internationally minded people who, recognizing their common humanity and shared guardianship of the planet, help to create a better and more peaceful world.

IB learners strive to be:
Inquirers They develop their natural curiosity. They acquire the skills necessary to conduct inquiry and research and show independence in learning. They actively enjoy learning and this love of learning will be sustained throughout their lives.

Knowledgeable They explore concepts, ideas and issues that have local and global significance. In so doing, they acquire in-depth knowledge and develop understanding across a broad and balanced range of disciplines.

Thinkers They exercise initiative in applying thinking skills critically and creatively to recognize and approach complex problems, and make reasoned, ethical decisions.

Communicators They understand and express ideas and information confidently and creatively in more than one language and in a variety of modes of communication. They work effectively and willingly in collaboration with others.

Principled They act with integrity and honesty, with a strong sense of fairness, justice and respect for the dignity of the individual, groups and communities. They take responsibility for their own actions and the consequences that accompany them.

Open-minded They understand and appreciate their own cultures and personal histories, and are open to the perspectives, values and traditions of other individuals and communities. They are accustomed to seeking and evaluating a range of points of view, and are willing to grow from the experience.

Caring They show empathy, compassion and respect towards the needs and feelings of others. They have a personal commitment to service, and act to make a positive difference to the lives of others and to the environment.

Risk-takers They approach unfamiliar situations and uncertainty with courage and forethought, and have the independence of spirit to explore new roles, ideas and strategies. They are brave and articulate in defending their beliefs.

Balanced They understand the importance of intellectual, physical and emotional balance to achieve personal well-being for themselves and others.

Reflective They give thoughtful consideration to their own learning and experience. They are able to assess and understand their strengths and limitations in order to support their learning and personal development.

APPENDIX XIII: An example for Teacher by Teacher Analysis

TA4 was chosen to be representative of the Teacher-by-Teacher Analysis. All other teachers' data was analyzed in the same way. The decision to select TA4 was based on her years of experience teaching both the TNEP and the IBDP. Knowing that she had plenty of experience teaching both programmes would eliminate the uncertainties about analysing whether what takes place in the class might be affected by the teacher being new to the programme, the system, or the school. Also, she was one of those who took a professional interest in the research and tried to help professionally.

TA4 is one of the Turkish teachers in the mathematics department. Copies of her observation schedule, self reflection form, retrospective interview form, tallying of data and comparative graphics appear at the end of this account. To ensure anonymity, specific demographic information was blocked out on the forms included..

Analysis of TA4's Observation Schedule

In part (a) *Teacher Talk,* TA4's results show us that she has done more talking to the IBDP group: Total IB63/ R49. The categories that show any difference are: (1) *Giving factual information* (IB13/R8), which is a difference of five, not a big difference, and (8) *Giving instructions* (IB23/R16), where the difference is seven. These two categories are similar because giving instructions is also factual. When we look at the total of these two columns, the difference does not balance out, but they become more pronounced: IB13 + 23 = 36/R 8 +16= 24. So if we were to cluster them together, TA4 would be found to be giving a lot more factual information to the IBDP group. In the other main instructional category (9) *Explaining,* where almost all the other teachers showed meaningful discrepancy, TA4's results were very similar: IB23/R21. Although close, she still did a little more active explaining to the IBDP group. This minor variation that is classified as 'close' is also present under *teaching review* as IB2/R0, which can be a further small addition to the *factual information* grouping. In all the other categories in this group, TA4's results did not vary at all, except in *making connections,* by just one in favour of the Regular (IB2/R3*).* These results may be interpreted as TA4 doing a lot more direct teaching in the IBDP group, which is actually inconsistent with the IB philosophy, where

the students should be encouraged to find out more by themselves so that they become enquirers and critical thinkers.

In part (b): *Questions*, the total shows little discrepancy: IB54/R51. The first category, (1) *procedural questions,* is the one that I have highlighted in red, showing a difference. However, the number of tick marks is IB9/R4, which is a difference of five, the borderline between 'close' and 'different' ratings. According to TA4, the explanation of this excess might be that the IBDP group is used to more detailed plans: "Being a world wide programme, the plans are almost foolproof. … Whereas, in the Turkish system students cooperate more and ask each other what they have not understood and the habit of pre-planning is not well established." So probably students are used to being planned and demand better instructions and factual information before starting work.

All the other question types are within the 'close' rating boundaries showing a difference of less than five tick marks. Even with these very similar results, the *procedural* and *narrow questions* are more in the IBDP group whereas the *substantive* and *challenging* ones are more in the TNEP. During the interview, TA4 made a remark about the presence of more in-depth teaching and learning of mathematics in the TNEP group due to the extra requirements of the Turkish curriculum and the university examinations.

In section (c) *Clarifications*, the tableau is not much different. The results are very close: IB46/R44. Although there is a difference of +2 in favour of the IBDP group, it is not big. Looking at this in detail, the section labelled (1) *group clarifications,* are IB21/R17, and (2) *individual clarifications* are IB25/R27. The teacher seemed to be very consistent in the amount of clarifications given to both groups, which may indicate that this teacher's style does not change much according to the programme that is being taught.

Section d- *Teacher Behaviour*: Under this heading, there is a consistency of similar behaviour in how the teacher treats the two groups with only two out of twelve categories showing a difference of five and all the rest are either close or the same. The two different categories are *writing on board* (IB12/R7) and *walking around* (IB24/R19). She seemed to be moving around more giving more individual attention to and checking the IBDP group. In the category *showing* (IB12/R12) and *encouraging* (IB9/R9) there was no discrepancy.

In general, there were a lot more similarities than differences when her classes were compared. TA4, being an experienced teacher in both programmes treats, both classes quite similarly whether they are IBDP or TNEP. She used the same techniques; her approach and style were consistent in both groups.

TA4's Self-reflection Form was surprising in the sense that it did not reflect the similarity of results in the Observation Schedule analysis. Also the interview elaborating on the Self-reflection Form interestingly showed even more variation. One comment she made that is important about the school culture on the whole was also reflecting this duality of perception and reality. She said, "The two groups seem to be somewhat polarized. Students think they do very different things, whereas the reality is not so." If they are not doing different things as the observations of TA4 also suggest, teachers and administration are not communicating the facts well. This is important to overcome the polarization which does no good for school spirit and culture. If teachers such as TA4 became aware of the fact that in spite of what they believe about the existence of differences between the IBDP and TNEP groups, their in class behaviour is very similar, they can communicate this reality to the students

Analysis of the Self-Reflection Form for TA4:

This analysis is made according to colour coding clusters of same, close and different categories.

A. *Same*: In a total of twenty-five categories, she marked only four of them as the same: relationships with the students, attitude to discipline, the quality of questions, Teacher creativity.

B. *Close*: In eight categories, the discrepancy was small, meaning the columns ticked were adjacent. They were: *Relationships with parents* (I4/R3), *Pressure felt for grades* because of university examinations (OSS/SAT) and parental pressure. In all of these categories IBDP was ranked (I) 4, while TNEP (R) 5 indicated quite high pressure on both groups, but a little more on the TNEP group. The main reason for parental pressure was university examinations and application process. Under the category *Instruction*:

creativity was ranked (IB5/R4) in favour of the IBDP. TA4's explanation was that IBDP had laid out what is included and excluded very clearly. Teachers did not need to spend their meeting time on mundane problems and could work on more creative planning, for example more use of technology. TA4 said that IBDP methods and syllabus inspired more *life connections* (B5/R4) to be made in the TNEP group. She explained that attending conferences worldwide increased sharing with other IBDP teachers from around the world. As a natural consequence, teachers learn more about life connections and comparisons they can use in their lessons by exchanging ideas with other teachers from all around the world. *Homework* (IB 3/R4) and *Creativity* (IB4/R3) were the other two categories that were marked close. TA4 thought these were more related with the student profile. As explained above time and amount of material to cover are shown as restrictive effects on creativity on the part of both the teacher and the students.

C. *Different*: TA4 found a big discrepancy in thirteen out of twenty-five categories. These were: *Relationship with colleagues* (I4/R2). She added the word cooperation next to the column to define the nature of the relationship better. She explained that there are fewer IBDP teachers, which made more cooperation possible. In the Regular Group, she said teachers spend time trying to adapt to each other, and cooperation is more difficult because of time pressure. The reason for the difference in category *Pressure felt*: time (I1/R5) is also covered in the above explanation.

According to TA4, one other feature of IBDP is that the syllabus is clearly laid out and teachers do not need to spend their meeting time on mundane problems and can work on more creative planning, for example more use of technology. She said, "Planning is important. For the Regular group we need teachers to be really efficient because there are not detailed and fool-proof guidelines as in the IB. Follow up is also much better in IBDP." This highlights the amount of help teachers get from the IB such as detailed plans and teacher training workshops. With such assistance less experienced teachers have greater chance of achieving success with their students. However, in the TNEP, such teacher assistance does not exist. Therefore, better skills and experience of the teacher becomes necessary. TA4 summarized this need as "Many problems can be solved by good teachers, who know what they are doing." To help this, IBDP seems to be doing a better job of providing necessary professional development opportunities for teachers with their workshops and on-line curriculum materials.

Under *Attitude*: TA4 has ranked *Bias toward subject matter* and *toward students* as (I4/R2) and her explanation was that she feels more satisfaction teaching the TNEP group because she feels satisfied with covering more content in her field. She feels the IB students are more relaxed because they do not have to prepare for the university examinations and attend weekend courses. However, as a teacher she prefers more driven students, and she thinks the TNEP group works more rigorously and is more driven. In harmony with the above, under the category *Instruction* TA4 thinks there is more *depth* (I2/R5) and the *pace* is faster in the TNEP (I3/R5). Related with the theme of time, TA4 has ranked both *team-work/group work* and o*pportunity for supplementary classes* as (I4/ R2) linked with the Turkish University prep courses that the Regular students attend on weekends and after school, which do not leave time for the TNEP group to work with the teacher after school.

The other big difference categories in favour of IBDP related with content load and time themes again are *Questions*: *Frequency* and *opportunity for students* both ranked (I 5 /R3) and *Assessment*: TA4 says that IBDP group have time for more alternative assessment such as portfolio work because there is less material to cover. The number representations below speak for themselves. They are in direct correlation with the time left for students to do in depth work due to the amount of work to cover. More coverage means less time for *challenging* (R3/IB5) and *versatile* (R2/ IB5) assessment and more for *rote* (IB2/ R5) assessment and teacher centred work.

The two recurrent themes that emerge as reasons for teaching style applications that become clear from the above rankings and explanations are a) time and b) content load. There may be different and sometimes conflicting reasons that influence these. A good example of such conflict was this explanation from TA4: “IBDP group handles more challenging questions although the programme of the TNEP group has more, and they know more (in the sense of covered material). However, the IBDP group has more time to work on challenging questions.” Another dilemma she felt was expressed as “The amount of common examinations at school also poses a problem and causes rote learning. More alternative assessment is necessary for challenging the students, but there is not enough time.”

Retrospective Interview of TA 4 and Comparison of the Perceived and the Observed

Data gathering was completed by the Retrospective Interviews that were explained earlier. The comparison of TA4's in class observations with the Observation Schedule and the self-reflection interview carried out retrospectively yielded the following results. Out of 28 different categories eight were the same in observed and perceived, ten items were in close range and the remaining ten were different.

The results of observations had fewer differences than the perceptions of the teacher (5 observed / 8 perceived). However, both in the observation results and the perception results, in the three groups of categorization as same, close and different, the group that had the least tick marks was the one showing differences. Therefore, I concluded that the teacher's awareness about what was actually taking place was quite realistic.

I do not want to go into an investigation of teachers' perception and the observed behaviour, which can be a topic for possible future research, but prefer to look a little more into TA4's comparative results. The perception of TA4 about most of the twelve items under *Teacher Behaviour* seemed to be on target, and the differences in this section corresponded to 'close' in the observed. This can be interpreted as the teacher being aware of the way she behaves in the class.

The major differences in *Teacher Talk* were in *giving factual information and explaining*. The teacher bias in the sense of preference of one of the programmes may be the reason for such inverse evaluation. In items such as *reference to IB and OSS,* the teacher could have been influenced by her general opinion, rather than the period observed. For characteristics such as *creativity, making connections and comparisons*, the teacher's prejudices about the characteristics of the two programmes may have influenced her ranking.

APPENDIX XIV: Comparison of averaged results of the mathematics and language classroom data for IBDP and TNEP (R) sections

COMPARATIVE TABLE OF AVERAGES

		MATH AVG	LANG AVG	IB-MATH AVG	R-MATH AVG	IB-LANG AVG	R-LANG AVG
Teacher Talk		**90**	**72**	**47**	**43**	**42**	**30**
	1-giving info (factual)	20	6	11	9	3	3
	2-teaching (review)	5	3	3	2	1	1
	3- make comparison	1	7	0	1	6	1
	4-make connections (RL,Int)	2	15	1	1	9	6
	5-uses creativity	0	1	0	0	1	0
	6-ref to IB	0	0	0	0	0	0
	7-ref to ÖSS	0	0	0	0	0	0
	8- giving instructions	20	12	11	10	6	5
	9- Explaining	42	29	21	21	16	13
Questions		**70**	**84**	**34**	**36**	**42**	**42**
	1-procedural	9	9	6	3	4	5
	2-narrow/restricted	25	29	13	12	15	14
	3-substantive	22	25	9	13	11	14
	4-challenging	13	18	6	8	10	9
	5-assessing	1	3	1	0	2	0
Questions & Answers (Clarification)		**82**	**54**	**42**	**41**	**23**	**32**
	1- Addressing the group	37	22	19	19	8	14
	2- Addressing the individual	45	32	23	22	14	18
Teacher Behaviour		**210**	**116**	**107**	**103**	**50**	**66**
	1- Showing	27	29	13	14	11	19
	2- Drawing	9	2	3	6	0	2
	3- Demonstrating	14	5	7	8	1	4
	4- Affirming	31	21	16	15	13	8
	5- Encouraging	11	13	6	5	5	8
	6- Discouraging	3	2	2	1	0	2
	7- Natural comments	11	8	4	7	4	4
	8- Feedback providing	20	9	11	9	6	3
	9- Writing on board	31	4	16	15	2	2
	10 - Walking around	19	7	12	7	2	5
	11 – Reading	3	8	2	1	5	3
	12 – Checking	32	8	15	17	2	6
TOTAL		**452**	**326**	**229**	**222**	**158**	**169**

APPENDIX XV: University Placement Results

	ÖĞRENCİ ADI	ÖĞRENCİ SOYADI	ÜNİVERSİTE ADI	BÖLÜM ADI	YURT DIŞI ÜNİ
1	DENİZ	ADALI	SABANCI Ü.	EKONOMİ-YÖNETİM BİLİMLERİ PROG.	
2	EZGİ	AGUDAY	YEDİTEPE Ü.	ECZACILIK	
3	BURCU	AĞMA	SABANCI Ü.	EKONOMİ-YÖNETİM BİLİMLERİ PROG.	
4	AHMET OĞUZ	AKAL	İSTANBUL BİLGİ Ü.	HUKUK	
5	AYDIN	AKALTAN			
6	YİĞİT	AKAR	SABANCI Ü.	MÜHENDİSLİK VE DOĞA BİLİMLERİ PROG.	
7	ALİ CAN	AKDAĞ	KOÇ Ü.	SOSYOLOJİ (İNG.)	
8	CEM	AKŞEHİRLİOĞLU	KOÇ Ü.	ELEKTRİK-ELEKTRONİK MÜH. (İNG.)	
9	SERKAN	ALDİŞ	KOÇ Ü.	EKONOMİ (İNG.)*	East Anglia (
10	MURAT CAN	ALTUN			University of War
11	ARİ	AREVYAN			Northwestern U
12	CAN	ARICAN			Northwestern U
13	GÖZDE	ARIĞ			London College of F
14	ECE	ARSLAN	SABANCI Ü.	EKONOMİ-YÖNETİM BİLİMLERİ PROG.	
15	OĞUZHAN	ATAY			Princeton Uni

16	NAZLI GÜNER	BABALOĞLU	KOÇ Ü.	ULUSLARARASI İLİŞKİLER (İNG.)	City Mary Univers
17	ONUR	BALABAN	SABANCI Ü.	MÜHENDİSLİK VE DOĞA BİLİMLERİ PROG.	
18	SELİN	BASMACI			Central St. Martins Sch
19	ZEYNEP	BATU	YEDİTEPE Ü.	DİŞ HEKİMLİĞİ	
20	BEGÜM NAZ	BAYIRBAŞ	KOÇ Ü.	HUKUK (İNG.) (DESTEK BURSLU)	
21	ASLI	BAYKAL			New York Univer
22	ADİL MERT	BAYKAL	KOÇ Ü.	İŞLETME (İNG.)	
23	ASLI	BAYRAK	ODTÜ	SOSYOLOJİ	
24	AYŞEN	BAYRAKTAR	MARMARA Ü.	İŞLETME (ALM.)	
25	ALP	BEBASA			Georgetown Un
26	MİLES	BERG			University of V
27	DUYGU	BEYAZO	İSTANBUL BİLGİ Ü.	HUKUK	
28	EMİR CEM	BİLGE	BOĞAZİÇİ Ü.	ENDÜSTRİ MÜH.	
29	SİNAN	BOLAK			New York Un
30	MEHMET BERK	BOSTANCI	MİMAR SİNAN GÜZEL SANATLAR Ü.	MİMARLIK	
31	PELİNSU	BULUT			New York Un
32	ZAFER	BÜYÜKKEÇECİ	İTÜ	ÇEVRE MÜH.	
33	HALİL	BÜYÜKKIDIK	SABANCI Ü.	MÜHENDİSLİK VE DOĞA BİLİMLERİ PROG.	
34	IRAZ	CANDAŞ	İTÜ	İÇ MİMARLIK	
35	SİNAN	CENGİZ	KOÇ Ü.	İŞLETME (İNG.) (DESTEK BURSLU)	

36	HATİCE MİNE	ÇAKMAK			Columbia Uni
37	BERK	ÇAPUTÇU	KOÇ Ü.	BİLGİSAYAR MÜH. (İNG.)	
38	BATUR	ÇAVDAR	IŞIK Ü.	SAYISAL PROGRAMLAR	
39	ÖZBEK	ÇAVUŞOĞLU	KOÇ Ü.	İŞLETME (İNG.)	
40	EMRE ZİYA	ÇETİN	SABANCI Ü.	MÜHENDİSLİK VE DOĞA BİLİMLERİ PROG.	
41	KADİR	ÇEVİKBAŞ	GALATASARAY Ü.	HUKUK	
42	EBRU	ÇİZMECİ			Columbia Uni
43	MEHMET CAN	ÇOLAKOĞLU	SABANCI Ü.	MÜHENDİSLİK VE DOĞA BİLİMLERİ PROG. (ONUR BURSU)	
44	MACİT	ÇOLAKOĞLU	SABANCI Ü.	EKONOMİ-YÖNETİM BİLİMLERİ PROG.	
45	GÖZDE	ÇÖREKÇİOĞLU	KOÇ Ü.	EKONOMİ (İNG.) (BAŞARI BURSLU)	
46	ORÇUN	ÇULCUOĞLU			
47	SELİN	DAVİDYAN	ODTÜ	SOSYOLOJİ	
48	SERCAN VAHİTTİN	DEDE	İSTANBUL TİCARET Ü.	BİLGİSAYAR MÜH.	
49	İBRAHİM ARDA	DEMİRCİOĞLU	İSTANBUL BİLGİ Ü.	HUKUK	
50	MEHMET BERK	DENİZ	İSTANBUL BİLGİ Ü.	İŞLETME	
51	MELİSA	DENİZERİ			Parsons New
52	NİLÜFER NAZLI	DERELİ	KOÇ Ü.	BİLGİSAYAR MÜH. (İNG.) (DESTEK BURSLU)	
53	SADEL SERA	DİLMENER			Duke Unive
54	MEBRURE EYLÜL	DİZDAR	İSTANBUL BİLGİ Ü.	İŞLETME	London College of Fa
55	AYŞE SU	DOĞRU			University of Westn

56	ZEYNEP	DÖLAY	SABANCI Ü.	SANAT VE SOSYAL BİLİMLER PROG.	
57	ASLI	DÖLAY	KOÇ Ü.	İŞLETME (İNG.)	
58	CRİSTİANA	DUCA			University of Westn
59	DENİZHAN	DURAN			Middlebury C
60	NATHALİE NEOMİ	ELVAŞVİLİ			UPENN
61	BİRSEN IŞIN	EMEÇ	İSTANBUL BİLGİ Ü.	İŞLETME	
62	BURCU	EMİNOĞLU	İSTANBUL BİLGİ Ü.	İŞLETME - EKONOMİ*	University of Westn
63	MERVE	ERAYDIN	İSTANBUL BİLGİ Ü.	EKONOMİ (BURSLU)*	Boston Univ
64	FİGEN SENA	ERCAN	KOÇ Ü.	ULUSLARARASI İLİŞKİLER (İNG.) (DESTEK BURSLU)	
65	ÖZGE	ERDOĞAN	YEDİTEPE Ü.	DİŞ HEKİMLİĞİ	
66	VOLKAN	EREN	İTÜ	İNŞAAT MÜH.	Carnegie Mellon U
67	MİLA	ERER			Columbia Uni
68	MİNA GÜL	ERGENELİ	SABANCI Ü.	EKONOMİ-YÖNETİM BİLİMLERİ PROG.	
69	MİNE	ERİŞİR	BOĞAZİÇİ Ü.	ÇEVİRİBİLİM	
70	NİYAZİ YİĞİT	ERKUT	BOĞAZİÇİ Ü.	KİMYA MÜH.*	University of Ba
71	FAHRETTİN	EROĞLU	İTÜ	İNŞAAT MÜH.	
72	EZGİ	ERSARAÇ	SABANCI Ü.	MÜHENDİSLİK VE DOĞA BİLİMLERİ PROG.	
73	EMRE	ERSOY	İSTANBUL BİLGİ Ü.	HUKUK	
74	ECEM	ERŞEKER			Swarthmore C
75	ÖMER FARUK	ERTEKİN	İSTANBUL BİLGİ Ü.	HUKUK	

76	BARIŞ	ERTUFAN	SABANCI Ü.	SANAT VE SOSYAL BİLİMLER PROG.	
77	DENİZ	EVİN	İSTANBUL TİCARET Ü.	İŞLETME	
78	MERT	GENCEL	İSTANBUL TİCARET Ü.	ULUSLARARASI TİCARET	
79	GÖRKEM ÖZHAN	GEYLANİ			Penn State Uni
80	AHMET BURAK	GÖKÖZ			
81	IŞIK	GÖKŞİN	KOÇ Ü.	KİMYA-BİYOLOJİ MÜH. (İNG.)	
82	BURCU	GÜÇÜK			Chapman Uni
83	BERKAY	GÜL	MARMARA Ü.	HUKUK	
84	MELDA	GÜL	YILDIZ TEKNİK Ü.	KİMYA MÜH.	
85	MEHMET KEREM	GÜLŞEN	KOÇ Ü.	SOSYOLOJİ (İNG.)	
86	ZELİHA DENİZ	GÜNAY	İSTANBUL Ü.	HUKUK	
87	ZEYNEP NUR	GÜNAY	KOÇ Ü.	EKONOMİ (İNG.) (DESTEK BURSLU)	University of C
88	MEHMET CHARLES	GÜNAY			Penn State Uni
89	CENK	GÜNER	İTÜ	MAKİNE MÜH.	
90	EGE	GÜRDENİZ			Yale Univer
91	ŞEYMA	GÜRLEYİK	SABANCI Ü.	EKONOMİ-YÖNETİM BİLİMLERİ PROG.	
92	EGE	GÜROCAK	KOÇ Ü.	İŞLETME (İNG.)	Boston Unive
93	CAN	GÜRSES			University of Sus
94	HALİL GÜRHAN	HANİF			Babson Col
95	ALP AVİ	HARA			

96	EMİNE BEGÜM	HARMANCI	KOÇ Ü.	HUKUK (İNG.)	
97	ABDULLAH ENİS	HAŞİM			Queen's Universit
98	FEHİM	HATİPOĞLU	İSTANBUL BİLGİ Ü.	EKONOMİ	Purdue Unive
99	TUNA	HINÇAL	SABANCI Ü.	MÜHENDİSLİK VE DOĞA BİLİMLERİ PROG.	
100	MEHMET BERK	İÇLİ			London Coll Communicatio
101	NAZLI	İLMEZ	MARMARA Ü.	SOSYOLOJİ (İNG.)	
102	HASAN BATUHAN	İLYEM	İSTANBUL BİLGİ Ü.	REKLAMCILIK	
103	JENNİFER	İPEKEL			Parsons New
104	MERVE	İŞERİ			Architectural Ass. Architectu
105	PELİN	KAHRAMAN			
106	FEYZA FAYE	KAİNO	KOÇ Ü.	İŞLETME (İNG.)	Parsons New Y
107	ELİF CANSU	KARAAHMETOĞLU	YEDİTEPE Ü.	TIP	
108	DİLA	KARABEKİR			Fashion Institute of
109	ÇAĞIL	KARAHASANOĞLU	KOÇ Ü.	HUKUK (İNG.)	
110	ALARA	KARAKAŞ			New York Un
111	BERKE	KARAKUŞ			Purdue Univ
112	EMRE	KARAMANCI			McGill University
113	NUR	KARATOPRAK	SABANCI Ü.	EKONOMİ-YÖNETİM BİLİMLERİ PROG. (BAŞARI BURSU)	
114	AYCAN	KATITAŞ	BOĞAZİÇİ Ü.	SİYASET BİLİMİ VE ULUSLARARASI İLİŞKİLER	

115	CANSARP	KAYA	BOĞAZİÇİ Ü.	İŞLETME	
116	YAMAN	KAYABALI	SABANCI Ü.	EKONOMİ-YÖNETİM BİLİMLERİ PROG.	
117	BURCU	KEMENT			UPENN
118	NAZ	KESKİN			Boston Col
119	HAKAN	KILIÇ	ODTÜ	KÜRESEL VE ULUSLARARASI İLİŞKİLER (UOLP-SUNY BİNGHAMTON)	
120	HÜSEYİN	KIN	İSTANBUL BİLGİ Ü.	ULUSLARARASI FİNANS	
121	CAN	KISAGÜN			Northwestern U
122	PELİN	KIVRAK			Harvard Univ
123	JOY	KİM			George Washingtor
124	BATUR	KOCAGİL	İSTANBUL BİLGİ Ü.	ULUSLARARASI TİCARET VE İŞLETMECİLİK	
125	BURCU	KOCAMIŞ	KOCAELİ Ü.	TIP	
126	EMRE	KOÇ	SABANCI Ü.	MÜHENDİSLİK VE DOĞA BİLİMLERİ PROG.	
127	ASLI	KOLCU	İSTANBUL BİLGİ Ü.	SİNEMA VE TELEVİZYON	
128	DENİZ PINAR	KONUK	BOĞAZİÇİ Ü.	SOSYOLOJİ	
129	LATİFE FEYZA	KÖKSAL			Carnegie Mellon U
130	IRAZ	KÖREZLİOĞLU			Connecticut C
131	GÜL	KURTAR	SABANCI Ü.	MÜHENDİSLİK VE DOĞA BİLİMLERİ PROG.	
132	BENGİSU	KUŞÇU			Duke Unive
133	MERVE	KÜÇÜKER	KOÇ Ü.	ENDÜSTRİ MÜH. (İNG.)	
134	BUM SEOK	LEE			Brandeis Univ

135	SELEN	MANDEL	YEDİTEPE Ü.	BİYOMEDİKAL MÜH.	
136	ELÇİN	MARAŞLI			School of the Museum
137	TALAR	MARKAROĞLU	SABANCI Ü.	EKONOMİ-YÖNETİM BİLİMLERİ PROG.	
138	BURAK	MEMİŞ			Boston Col
139	TURGUN İDİL	MEŞE	BAHÇEŞEHİR Ü.	AMERİKAN KÜLTÜRÜ VE EDEBİYATI (BURSLU)	
140	ELİF	MIHÇIYAZGAN	SABANCI Ü.	EKONOMİ-YÖNETİM BİLİMLERİ PROG.	
141	LİSA	MOLİNA	İSTANBUL BİLGİ Ü.	İŞLETME	
142	YASEMİN	NAHUM			Syracuse Univ
143	CANSU	OÇAK	SABANCI Ü.	EKONOMİ-YÖNETİM BİLİMLERİ PROG.	Brown Univer
144	MEHMET KUTALMIŞ	OKUR	İTÜ	İNŞAAT MÜH.	
145	OKAN	OKUTGEN			Princeton Uni
146	ÇAĞRI BERK	ONUK	KOÇ Ü.	FELSEFE (BAŞARI BURSLU)	Princeton Univ
147	KAĞAN	ORAL	İSTANBUL BİLGİ Ü.	İŞLETME	
148	GÜRCAN KEREM	ORAL			Columbia Uni
149	CAN	ORMAN	SABANCI Ü.	SANAT VE SOSYAL BİLİMLER PROG.	
150	YİĞİT SITKI	OSKAY			UPENN
151	SERDAR	ÖNAL	KOÇ Ü.	MATEMATİK (İNG.) (BAŞARI BURSLU)	
152	DEFNE	ÖNEN			Parsons New
153	OĞLULCAN	ÖYMEN			Syracuse Univ
154	BAŞAR	ÖZBENT	İTÜ	İŞLETME MÜH.	

155	MERVE	ÖZÇAKIR	BOĞAZİÇİ Ü.	MATEMATİK	
156	SEVİNÇ	ÖZÇELİK	BOĞAZİÇİ Ü.	İŞLETME	
157	EZGİCAN	ÖZDEMİR			New York University
158	HALUK	ÖZEK			Bucknell Univ
159	MURAT DERYA	ÖZEN	SABANCI Ü.	MÜHENDİSLİK VE DOĞA BİLİMLERİ PROG.	
160	MUSTAFA CAN	ÖZER	SABANCI Ü.	MÜHENDİSLİK VE DOĞA BİLİMLERİ PROG. (BAŞARI BURSLU)	
161	GİZEM	ÖZKAN	KOÇ Ü.	PSİKOLOJİ (İNG.)	
162	MERVE MISRA	ÖZKUŞ	BOĞAZİÇİ Ü.	FELSEFE	
163	SARP	ÖZTÜRE			University of Tex
164	DENİZ GÜLFEM	ÖZTÜRK	BİLKENT Ü.	MOLEKÜLER BİYOLOJİ VE GENETİK	
165	EZGİ	ÖZTÜRK			New York Uni
166	ZEYNEP ECE	ÖZYURT			London College of F
167	GÖRKEM	PANCAR	SABANCI Ü.	EKONOMİ-YÖNETİM BİLİMLERİ PROG.	
168	ELİF	PARLAK	ODTÜ	ELEKTRİK-ELEKTRONİK MÜH.	
169	AYCAN	PATIR	KOÇ Ü.	İŞLETME (İNG.)	
170	GİZEM	PİLAVCI	SABANCI Ü.	SANAT VE SOSYAL BİLİMLER PROG.	
171	YAKUP ALİ	SAATÇI	YEDİTEPE Ü.	ELEKTRİK-ELEKTRONİK MÜH.	
172	SELİN	SAPORTA	KOÇ Ü.	İŞLETME (İNG.) ❇	Bentley Col
173	SELİM CAN	SAZAK	BİLKENT Ü.	FELSEFE (BURSLU)	
174	SERRA	SEPKİN	KOÇ Ü.	HUKUK (İNG.) (DESTEK BURSLU)	

175	SERKAN	SİLAHDAROĞLU			Penn State Uni
176	GİZEM	SİRER	İSTANBUL BİLGİ Ü.	HUKUK	
177	KLODYA	SORYANO			Columbia Uni
178	ERDEM	ŞAHİN			Williams Co
179	KEREM	ŞAHİN			Tufts Unive
180	ZEHRA	ŞEN			Pratt Instit
181	SİMGE	ŞENALP	YEDİTEPE Ü.	DİŞ HEKİMLİĞİ	
182	ZEYNEP	ŞENÇELEBİ	KOÇ Ü.	BİLGİSAYAR MÜH. (İNG.)	
183	MÜGE	ŞİMŞEK	SABANCI Ü.	SANAT VE SOSYAL BİLİMLER PROG.	
184	CEYLAN ECE	TANES			Johns Hopkins U
185	SERRA	TANSEL			Central St. Martins Sch
186	BERK	TANYÜ	KOÇ Ü.	İŞLETME (İNG.)	
187	NAGEHAN	TARIM			Vassar Coll
188	TULU	TEKMEN			Drexel Unive
189	YAEL	TELVİ	GALATASARAY Ü.	SOSYOLOJİ ❇	University of No
190	YAMAN	TERZİOĞLU	SABANCI Ü.	EKONOMİ-YÖNETİM BİLİMLERİ PROG. ❇	Camberwell Colle
191	SELÇUK	TEVRÜZ	İTÜ	MAKİNE MÜH.	
192	MUHAMMET YUSUF	TOPÇU	SABANCI Ü.	EKONOMİ-YÖNETİM BİLİMLERİ PROG.	
193	BEGÜM	TOPÇUOĞLU	SABANCI Ü.	MÜHENDİSLİK VE DOĞA BİLİMLERİ PROG. (BAŞARI BURSLU)	
194	MELİS	TOPLUTEPE	KOÇ Ü.	İŞLETME (İNG.)	SOAS - University

195	AHMET	TOSUN			
196	MEHMET REHA	TUĞCU	KOÇ Ü.	EKONOMİ (İNG.)	
197	EFE CAN	TUNCAY	BAHÇEŞEHİR Ü.	İŞLETME	
198	BULUT	TUNCEL			Michigan State U
199	EKİN GÜNEŞ	TUNÇAY	ODTÜ	KİMYA MÜH.	
200	SUZAN AYŞE	TUSAVUL			Tufts Unive
201	AYŞE BERRAK	UĞUR	BOĞAZİÇİ Ü.	MOLEKÜLER BİYOLOJİ VE GENETİK	
202	MERT ALİ	ULUFİ	SABANCI Ü.	MÜHENDİSLİK VE DOĞA BİLİMLERİ PROG.	
203	HALİM	UMUR			University of Southe
204	VEDAT	UZDİL			Bentley Col
205	MERVE	UZUNOSMAN	GALATASARAY Ü.	SOSYOLOJİ	
206	İREM	YAMAN			Syracuse Univ
207	IRMAK	YAMANER	İTÜ	JEODEZİ VE FOTOGRAMETRİ MÜH.	
208	CANSU	YEMENİCİLER	İTÜ	İŞLETME (UOLP-SUNY NEW PALTZ) (%50 BURSLU)	
209	MERT CAN	YENER	SABANCI Ü.	EKONOMİ-YÖNETİM BİLİMLERİ PROG.	
210	KEMAL	YEŞİL			
211	BURAK	YEŞİLALTAY	İSTANBUL BİLGİ Ü.	HUKUK	
212	CAN	YILDIZ	SABANCI Ü.	MÜHENDİSLİK VE DOĞA BİLİMLERİ PROG.	
213	GÜLİN	YOLAÇ	YEDİTEPE Ü.	RADYO, SİNEMA VE TELEVİZYON (BURSLU)	
214	MUTULLAH CAN	YOLBULAN			George Washingtor

215	ALİ SİNA	YURTSEVER	İSTANBUL BİLGİ Ü.	HUKUK	

* işareti öğrencilerin tercihini göstermektedir...

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